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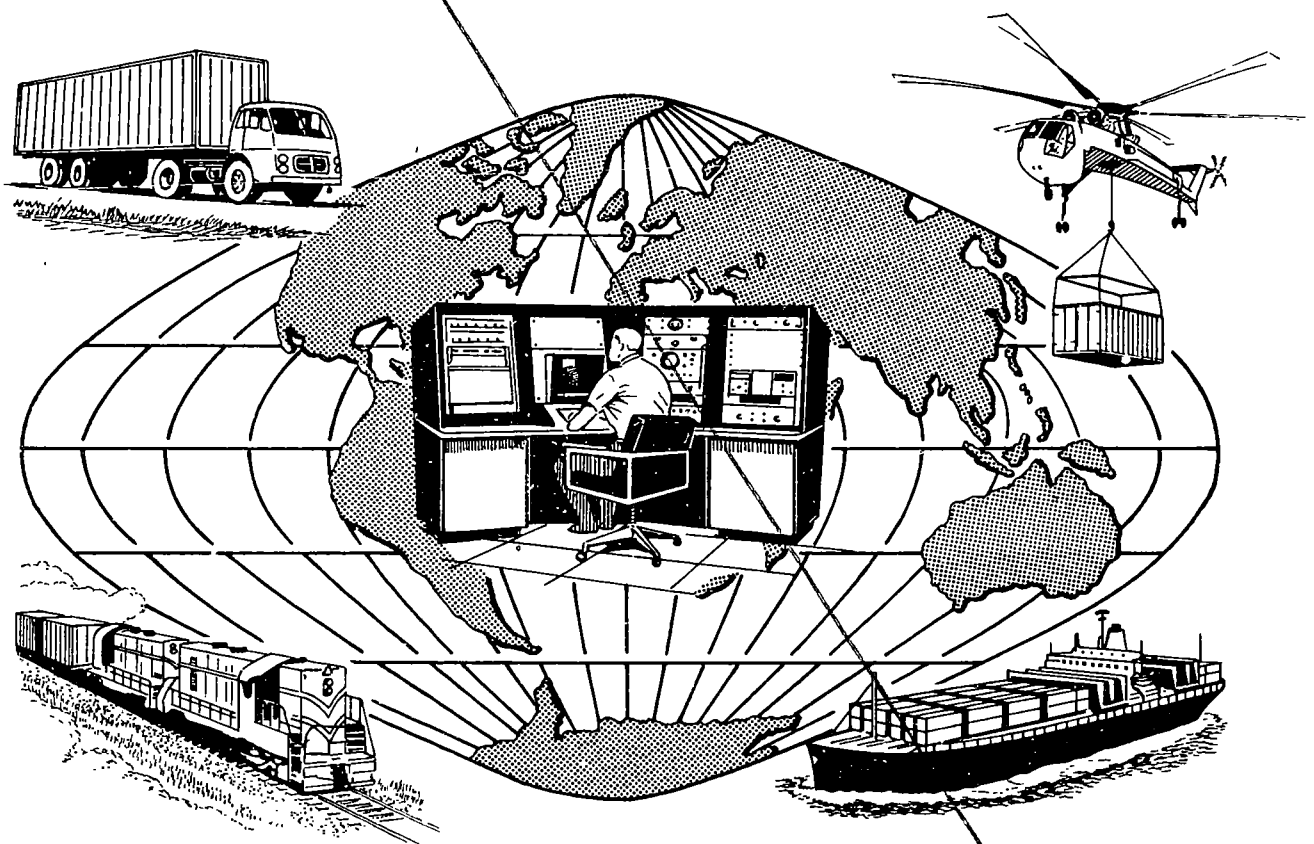
FM 55-11

FIELD MANUAL

ARMY MOVEMENT CONTROL UNITS



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HEADQUARTERS, DEPARTMENT OF THE ARMY
OCTOBER 1973

FOREWORD

This is a new manual, published as a training, planning, and operational guide for personnel concerned with managing and controlling the movement of Department of Defense sponsored shipments in the Army transportation system of a theater of operations. Intended primarily for movement management staff officers and movement control unit officers and enlisted personnel, it should, by promoting an understanding of the movement control system and how it operates, also prove helpful to users of transportation and to transportation mode and facility operators.

Chapters 2 through 5 discuss the organization, mission, functions, and capabilities of each Army movement control unit and team organized under the H-series tables of organization and equipment and the duties and responsibilities of assigned personnel. Additional chapters cover movement documents, planning, communications, and highway movements.

Subject matter addressed in the several appendixes includes the use of DOD Regulation 4500.32–R (Military Standard Transportation and Movement Procedures (MILSTAMP)), preparation of the transportation control and movement document (TCMD), movement priorities, and the derivation and use of the transportation control number. Also included as appendixes are a practical exercise in movement planning and one in highway movement computation. Pending availability of an Armywide compatible automatic data processing system, the manual is oriented toward manual procedures.

FIELD MANUAL
No. 55-11

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC *31 October 1973*

ARMY MOVEMENT CONTROL UNITS

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CHAPTER 1

INTRODUCTION

1–1. Purpose

The purpose of this manual is to show why and how the use of transportation movement resources, or modes (pipeline, motor, rail, water, and air transport), is managed and controlled in an oversea theater and to explain the duties of personnel assigned to a movement control unit or activity in providing that management. This manual *must* be used in conjunction with FM 55–10 and DOD Reg 4500.32–R (Military Standard Transportation and Movement Procedures) (MILSTAMP).

1–2. Scope

This manual discusses the organization, mission, capabilities, and functions of movement control units and teams; movement documentation and planning; highway traffic regulation; [1] and communications involved in movement control. This manual is a guide only; users, acting within the limits of their authority, may vary procedures when it is clear that such variations will result in improved operations.

1–3. Application

This manual is applicable without modification to general, limited, and cold war.

1–4. Definitions of Terms

A glossary is included at the back of this manual. The glossary lists and defines movement terms most commonly used.

1–5. Recommended Changes

Revisions to this manual may be necessary as new concepts emerge and as organizational structure and methods of employment change. Field experience may also suggest changes or improvements. Users of this publication are encouraged to submit recommended changes and comments for its improvement. Comments should be directed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. **Comments should be** submitted on DA Form 2028 (Recommended Changes to Publications) and **forwarded direct to the Commandant, US Army Transportation School, Fort Eustis, Virginia 23604.** If it appears that a recommendation, if approved, may significantly change existing Army doctrine, the originator may send an information copy of the recommendation through command channels to the Commander, US Army Logistics Center, ATTN: ATCL–CL, Ft Lee, VA 23801. This will shorten the time required for review and followup action.

1–6. International Standardization Agreements

This manual is in consonance with certain international standardization agreements which are identified by type and agreement identification number at the beginning of each appropriate chapter in the manual; key agreements are contained herein as appendixes.

a. DA Pamphlet 310–35, lists all standardization agreements, both of a materiel and a nonmateriel nature, binding upon the United States. The several types of agreements applicable to military operations which may affect movement control operations and the treaty organizations to which such agreements apply are listed below:

(1) STANAG (standardization agreement): applicable to nations of the North Atlantic Treaty Organization (NATO).

(2) CENTO STANAG (standardization agreement): applicable to nations of the Central Treaty Organization (CENTO).

(3) SEASTAG (Southeast Asia standardization agreement): applicable to nations of the Southeast Asis Treaty Organization (SEATO).

(4) SOLOG (standardization of operations and logistics): a nonmateriel agreement among the armies of the United States, the United Kingdon, Canada, and Australia (the ABCA nations). The term SOLOG now applies only to

[1] Highway traffic regulation is a distinct and separate function from that of highway traffic control. Refer to the glossary for clarification of the terms.

those nonmateriel agreements which were ratified and published before 20 September 1967.

(5) QSTAG (Quadripartite standardization agreement): materiel and nonmateriel agreements among the armies of the United States, the United Kingdom, Canada, and Australia (the ABCA nations). The term QSTAG, which was adopted on 20 September 1967, applies to all ABCA agreements (formerly designated as SOLOG's) ratified and published subsequent to that date.

b. US military operations are governed by these various agreements when US forces are employed within the geographical areas over which treaty organizations exercise jurisdiction; thus, while operating in a European country which is a member of NATO, US forces comply with the provisions of applicable STANAG's.

c. In a number of instances, the provisions of certain agreements have been accepted as doctrine by the United States and incorporated into the appropriate training and field manuals. This accepted and published doctrine then becomes applicable to Armywide operations. A prime example of this is the use of the metric system to indicate distances.

d. Although standardization agreements do not apply to military operations in CONUS, those which may concern a unit—in this case, those with a movement control impact—must be considered in training and operational phases to permit military personnel to become acquainted with their provisions. This is particularly true for units or groups of personnel earmarked for oversea assignment.

e. To minimize operational differences in the various types of standardization agreements of the several treaty organizations, it is practice for one organization to accept and publish under its auspices an agreement that has been ratified and published by another treaty organization. For instance, all or any part of a STANAG may be adopted by SEATO and be published as a SEASTAG. The same identifying number is used wherever feasible (DA Pam 310–35).

f. Standardization agreements applicable to transportation movements are as follows:

Title	*NATO STANAG's*	*CENTO STANAG's*	*SEATO SEASTAG's*	*ABC QSTAG's (SOLOG's)*
Principles and Policies of Movements	----	----	----	27R
Movements Duties in the Field	----	----	----	31R
Marking of Military Cargo for International Movement by All International Means of Transport	2023	----	----	----
Operation Orders for Road Movement and Road Movement Tables and Graphs	2041 (3d Ed)	2041	2041 [2]	51
Destruction of Military Technical Equipment	2113	----	2113	----
Route Network—Definitions and Characteristics	2151 (2d Ed)	2151	2151	----
Definitions and Regulations for Military Motor Movements by Road	2154 (3d Ed)	2154	2154	----
Road Movements and Transport Documents	2155	2155	----	----
Transport Request and Reply to Transport Request	2156	2156	----	----
Identification of Military Trains	2158 (2d Ed)	----	----	----
Identification of Movement Control and Traffic Control Personnel and Agencies	2159 (3d Ed)	2159	2159 (2d Ed)	----
Advice of Movement	2164	----	----	50R
Procedures for Military Trains Crossing Frontiers	2171	----	----	----
Classification of Restrictions Affecting the Movement of Certain Military Equipment and Vehicles by Land on Continental Western Europe	2832	----	----	----
Procedures for Tracing and Disposing of Air Baggage (BAGLO/TROBAG)	3344 (3d Ed)	3344	----	----
Air Transport Cargo/Passenger Handling Systems—Request for Information	3543 (2d Ed)	----	----	----

[2] Currently in draft form.

1–7. Theater Organization for Movements[3] Management

(fig 1–1)

a. Logistic support of a theater of operations involves four major segments of the movement system, one operating from CONUS or other offshore base into the theater (intertheater), and the others operating within the theater (intratheater); that is one within the communications zone (COMMZ), one between the COMMZ and points or areas in the field army area (interzonal), and one within the field army area.

b. The theater army support command (TASCOM), through the movement control agency assigned to the transportation command (TRANSCOM), serves as the essential point of interface and coordination for shipments entering or leaving the theater, and controls movements within the COMMZ and intertheater or intratheater shipments moving forward from the COMMZ.

c. Movement control centers established at the field army support command (FASCOM) and the corps support brigades control movements within their respective areas of responsibility including retrograde shipments.

d. To extend the activities of the movement control agency and centers into the field, transportation movement teams are positioned at critical points throughout the theater where they provide interface between the overall movement control system and the shippers, consignees, mode operators, and facility operators. These teams are discussed in detail in chapter 5.

e. The TASCOM movement control agency and the movement control centers at FASCOM and the corps support brigades schedule and control highway movements through the use of highway regulating teams located at critical traffic points.

f. When a corps is detached from the field army for a separate mission, it is assumed to have the relative status of a field army and reports to the theater commander. When operating in this status, the organization includes a corps support command (COSCOM) and its movement control center corresponds to the FASCOM movement control center.

g. When a corps-size element is the extent of the forces in a particular area (independent corps), it is assumed to have the relative status of a theater army. When operating in this status, the organization includes a COSCOM, whose movement control center (MCC) perform the functions of the TASCOM, FASCOM, and support brigade movement control units in the theater army and field army organization.

[3] The use of the terms "movements" and "movement" may prove confusing. For an illustration of the use of the terms, see "movements" and "movement control" as defined in the glossary.

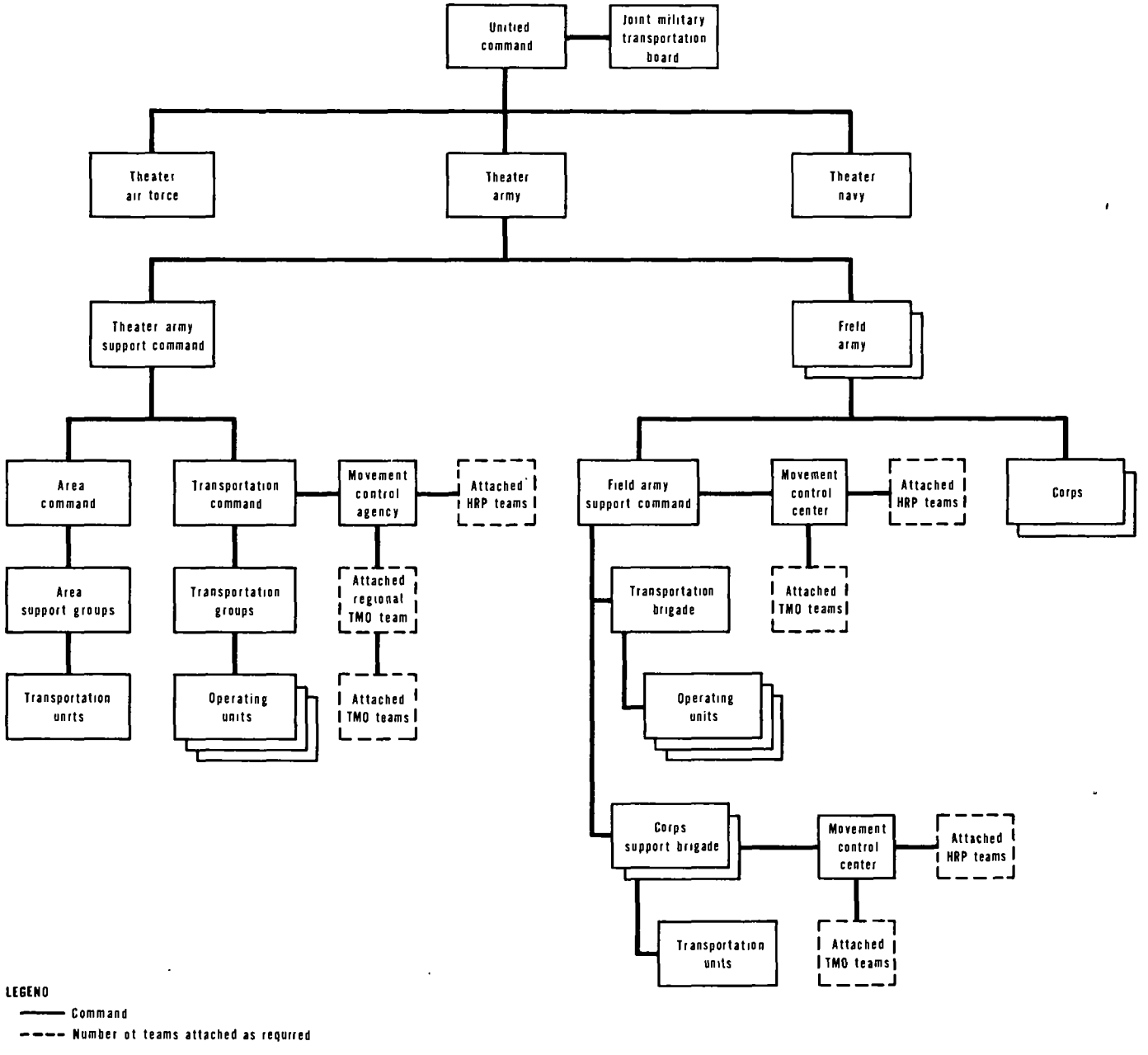


Figure 1–1. Transportation organization in a theater of operations.

CHAPTER 2

TRANSPORTATION MOVEMENT CONTROL AGENCY (THEATER ARMY SUPPORT COMMAND) (TOE 55–4) (SOLOG AGREEMENT 31R AND STANAG 3344)

Section I. ORGANIZATION, MISSION, CAPABILITIES, AND FUNCTIONS

2–1. Organization
(fig 2–1)

The Theater Army Support Command (TASCOM) movement control agency (MCA) is assigned to the transportation command (TRANSCOM). It is organized functionally to include an agency headquarters and a mission element composed of a movement control center (MCC) and a highway traffic headquarters (HTH). Additionally, the agency may be augmented by the use of teams as required to extend the functions of movement control and highway regulation into the field, thereby affording close and direct liaison with and assistance to the shipper and consignee, the mode operators, and the transportation facilities. The TRANSCOM commander designates the senior officer assigned to the MCA as the agency commander.

(Fig 2–1 located in back of manual)

a. The *agency headquarters* provides administrative support for all staff and field elements of the unit. In addition, the headquarters provides an administrative clerical pool and a message center in support of the MCC and the HTH. The agency headquarters does not provide any technical supervision of personnel assigned to the mission element.

b. The *movement control center,* under the staff supervision of the TRANSCOM assistant chief of staff (ACofS), movements, and under the command of the agency commander, carries out the movement management functions of the agency. The MCC consists of the plans and programs division, the freight movements division, the passenger movements division, and the special movements division.

c. The *highway traffic headquarters,* normally located with the MCC, also operates under the staff supervision of the TRANSCOM ACofS, movements, and under the command of the agency commander. It plans and coordinates the use of the controlled road nets in the communications zone (COMMZ).

d. Transportation movement offices (TMO's) are established at critical points (depots, transfer points, terminals) within the COMMZ to provide the necessary link between the MCC and the field activities. Formerly organic to the transportation MCA, the movement offices are now found in TOE 55–580. The number and types of teams used depend on the activities in the area and the density of movements. For additional discussion of TMO's, see chapter 5.

e. Highway traffic regulating teams found in TOE 55–540 are used to perform HTH functions within the COMMZ and between the COMMZ and the field army. Both the TMO's and the highway traffic regulating teams operate under the staff supervision and operational control of the ACofS, movements, of TRANSCOM. For addition discussion of highway regulating teams, see chapter 5.

2–2. Mission and Assignment

a. The mission of the transportation MCA is to operate the TASCOM MCC, the HTH, the TMO's and the highway regulating points.

b. The transportation MCA is assigned to TRANSCOM. It is allocated on the basis of one per TASCOM or major transportation element engaged in providing logistical base support for a major combat force.

2–3. Mobility

Organic vehicles of the transportation MCA provide the unit with approximately 50-percent mobility. Approximately six additional 2½-ton trucks with 1½-ton trailers are required to displace the unit in one move.

2–4. Capabilities

a. The transportation MCA has the capability to—

(1) Provide a central organization and the field offices to perform movement control services within the COMMZ and between the COMMZ and the field army (requires augmentation by TMO's from TOE 55–580).

(2) Provide a central organization and field offices to perform highway regulating services within the COMMZ and between the COMMZ and the field army (requires augmentation by highway traffic regulating teams from TOE 55–540).

(3) In an emergency, serve as an alternate for the TRANSCOM ACofS, movements, staff section.

b. The agency is dependent upon—

(1) Adjacent units for messing, organizational maintenance, personnel services and finance—normally, area support command units provide these services.

(2) A computer operating activity which supports the MCA, and which can be accessed by the TRANSCOM through an input/output device.

2–5. Functions

Within the capability limits of its assigned personnel, the headquarters of the transportation MCA carries out normal housekeeping and limited administrative support functions. Mission-related functions, which are the responsibility of the MCC and the HTH are as follows:

a. Planning, programing, supervising, and controlling the use of transport resources (except resources organic to supported elements) for movement of Department of Defense (DOD) sponsored personnel and materiel (except bulk POL moving by pipeline) within the COMMZ, and for interzonal shipments between the COMMZ and the field army area.

b. Providing the point of interface between movement activities in the theater and in the continental United States.

c. Providing technical supervision over movement control activities of subordinate commands and conducting technical assistance visits to installations and activities of the component commands.

d. Assuring that the movement of traffic is in accordance with general priorities established by the theater commander and with specific priorities assigned by using commands within such general priorities.

e. Developing, publishing, and distributing the movement program (see chap 7 for a detailed discussion of the movement program) and monitoring its execution.

f. Maintaining liaison and coordinating with other transport activities (for example, those of the Military Airlift Command, Tactical Airlift Command, US Navy, Military Sealift Command, commercial contractors, and host and allied nations).

g. Collecting, analyzing, and consolidating US Army sponsored cargo and passenger airlift and sealift requirements and forwarding to Department of the Army or US Air Force (theater) as appropriate.

h. Collecting, analyzing, and maintaining current statistical data concerning movement requirements, allocations, and utilization in order to provide more effective management of theater transport resources and to make timely and effective adjustments and improvements in the system where needed.

i. Determining the requirements for and physical location in the COMMZ of the regional TMO's; TMO teams A, B, and C; and highway regulating teams (chap 5).

j. Developing and supervising plans and programs for putting into effect the military standard transportation and movement procedures (MILSTAMP) policy guidance as set forth in DOD Regulation 4500.32–R, and maintaining surveillance over MILSTAMP procedures and systems to insure that they are uniformly applied by all components of the command.

k. Serving as a central point for collection, review, and evaluation of the MILSTAMP system in-transit performance by each activity responsible for handling DOD material. Developing uniform procedures for accumulation, review, analysis, and evaluation of each segment of the transportation cycle.

l. Developing and conducting research concerning improvements for small shipment consolidation programs.

m. Developing programs concerning in-transit loss and damage prevention.

n. Publishing and keeping current a facilities and services guide which lists and describes each installation in the theater that ships or receives supplies.

o. Publishing and keeping current a roster of activity address codes in the theater.

p. Recommending to the transportation command policies for the use of terminals of entry and exit for intertheater and intratheater shipments.

q. Arranging clearances and other related actions for the movement of overweight and outsize equipment.

r. In coordination with the HTH of the field army support command and the corps support brigade, developing, putting into effect, and monitoring the carrying out of the highway regulation plan.

s. Coordinating and controlling the use of containers, container chassis, and roll-on/roll-off (RORO) trailers within the theater and operating the theater container control activity.

t. Coordinating, by the application of automated data services, in advising and assisting:

(1) Distribution agencies in programing the positioning of stocks.

(2) Site selection authorities in evaluating the transportation considerations in the selection of sites.

(3) Procurement agencies in developing the most advantageous sources of supply.

(4) Shipping agencies concerning the effect of packing and packaging on distribution and utilization of transportation.

u. Determining requirements for contract service and commercial carrier service, submitting requirements to the theater procurement agency, and serving as a consultant to the procurement agency in the final negotiating for and procurement of required services.

Section II. DUTIES OF KEY PERSONNEL (SOLOG AGREEMENT 31R AND STANAG 3344)

2–6. Transportation Movement Control Agency Headquarters

(fig 2–1)

Following is a discussion of the key personnel in the agency headquarters and of their principal duties and responsibilities.

a. The *headquarters commandant*, who is responsible to the movement control agency (MCA) commander, commands the agency headquarters and provides for administrative and logistic support of the MCA and its field teams. Duties and responsibilities of the commandant include but are not necessarily limited to the following:

(1) Commands the agency headquarters and plans, directs, and supervises its activities so that it provides the required housekeeping support to the MCA and its field teams.

(2) Manages and supervises assignment, reassignment, and training of headquarters personnel.

(3) Establishes maintenance programs and schedules and is responsible for maintenance and care of individual and organizational equipment and materiel.

(4) Establishes headquarters policies, procedures, and standing operating procedures and insures that the headquarters complies with these and with policies and directives of the transportation command.

(5) Establishes and maintains communications security.

(6) Develops and insures adherence to the unit safety program.

(7) Maintains accepted standards of leadership, discipline, morale, and esprit de corps within the unit.

(8) Maintains liaison and promotes good relations with units upon which the MCA is satellited for mess, organizational maintenance, and personnel services.

(9) Inspects as necessary to keep himself informed concerning all aspects of his command.

(10) Stresses the principle of supply economy through the proper use, care, and maintenance of equipment.

(11) Is available to discuss matters of personal or mutual interest with agency personnel; insures prompt payment of troops and proper assignment and use of unit personnel.

(12) Maintains and supervises a command information program.

b. The *administrative-logistic officer* is the executive officer and, in the absence of the headquarters commandant, assumes command of the headquarters. He supervises and directs internal operations of the agency headquarters and insures that field teams receive required administrative and logistic support. Principal duties of the administrative-logistic officer include but are not necessarily limited to the following:

(1) Keeps the headquarters commandant informed concerning the status of the headquarters operation and any problems encountered.

(2) Maintains liaison with the supporting personnel services unit and insures that unit personnel actions and records are correct and up to date.

(3) Arranges for adjacent units to provide

mess and organizational maintenance support of the agency.

(4) Arranges for mess and organizational maintenance personnel to work with supporting units and monitors the performance of these personnel to insure that it is satisfactory.

(5) Arranges for attachment of field teams to adjacent units for logistic support and monitors the adequcy of support.

(6) Directs the operation of the headquarters message center and the administrative clerical pool in support of the movement control center and the highway traffic headquarters.

c. The *unit supply technician* is responsible for unit supply for the MCA and all field elements. He is the unit property book officer and hand-receipts equipment and vehicles to personnel of the agency and its field elements. His duties also include supervision of the *supply sergeant*, the *unit supply specialist*, and the *supply clerk*.

d. As the principal noncommissioned assistant to the headquarters commandant, the *first sergeant* is the representative between the commandant and the enlisted personnel of the MCA and its field elements and manages and coordinates the enlisted activities of the headquarters. In addition to being qualified as a first sergeant, he is also qualified as a *chief movement specialist* and should be qualified as a *logistics noncommissioned officer*. Duties of the first sergeant include the following:

(1) Supervises preparation of agency correspondence.

(2) Supervises administration of the agency headquarters, including files and preparation of recurring and special reports.

(3) Plans and posts daily agency details, coordinating with operating personnel as necessary.

(4) Maintains the duty roster.

(5) Supervises preparation of the morning report and maintenance of the personnel status board.

(6) Keeps informed of any changes in the personnel status of the company.

(7) Maintains records of leaves, passes, promotions, reassignment orders, and discharges.

(8) In coordination with key personnel, prepares the headquarters standing operating procedures.

(9) Exercises supervisory responsibility over housekeeping, work details, police, and construction projects in the agency area.

(10) Assists the headquarters commandant in advising enlisted personnel concerning personal problems.

(11) Advises the headquarters commandant concerning personnel and morale problems.

(12) Is qualified as a supervisory movements specialist, and should be logistics qualified under the program discussed in paragraph 2–11*d*.

e. The *personnel staff noncommissioned officer* serves basically as a liaison officer between the MCA headquarters and the supporting personnel and administration service provided by the area support command. He assists in and monitors all administrative and personnel actions carried out by the supporting service for MCA personnel and insures that all records are complete, up to date, and correct. He also advises the headquarters commandant concerning personnel administration matters.

f. The *communications chief* heads the communications operations in the agency. His duties include the following:

(1) Provides the communications service for the MCA.

(2) Establishes and maintains liaison with supporting signal services.

(3) Prepares the agency communications-electronics standing instructions (CESI) and communications-electronics operating instructions (CEOI).

(4) Establishes and directs communications training, operations, and operator maintenance in the MCA.

(5) Advises the headquarters commandant concerning communications matters.

g. The *supply sergeant* should be thoroughly familiar with directives prescribing the care and storage of supplies and equipment. He should be well founded in the fundamentals of inventory accounting methods and procedures for maintaining property books and supporting records. His specific duties encompass the following:

(1) Draws and issues to authorized personnel the supplies and equipment prescribed by the MCA TOE and other authority.

(2) Accounts for all supplies and equipment drawn by supply personnel.

(3) Inspects all nonautomotive equipment or supplies received by the unit for quantity and condition and arranges with the supplying agency for replacement or adjustment when appropriate.

(4) Maintains a stock of expendable supplies and controls their issue.

(5) Receives equipment that has been ren-

dered unserviceable through fair wear and tear, arranges for its turn-in to the appropriate supply facility, and draws replacements.

(6) Supervises the agency armorer.

(7) Advises the agency commandant concerning supply matters.

h. Under the supervision of the communications chief, the *communications center specialist*, the *senior switchboard operator*, and the *wireman* (field wireman) install, operate, and maintain the agency's wire communications system.

2–7. Plans and Programs Division
(fig 2–1)

The plans and programs division is responsible for developing, coordinating, publishing, and distributing the command movement program and, as directed, for preparing transportation movement plans and annexes in support of logistic or contingency plans. The division contains movement officer specialists in water movements, freight (cargo) movements, passenger movements, air movement coordination, and POL movement coordination. Each specialist participates in planning and programing by advising the division chief and by preparing that portion of the overall plan that pertains to his particular area of interest. In carrying out their responsibilities, the specialists coordinate with the other divisions of the movement control center (MCC); their counterparts of higher, adjacent, and subordinate elements; the Military Sealift Command; the Military Airlift Command; and host and allied nations. The duties of these personnel parallel each other in their respective areas of specialization and are reflected in the responsibilities of the division chief; therefore, this discussion does not address them individually since to do so would be, for the most part, repetitious. In addition to the foregoing personnel, the division organization provides an intelligence noncommissioned officer and enlisted planning supervisory personnel and movement specialists.

a. The *chief of the plans and programs division* directs, supervises, and coordinates the overall activities of the plans and programs division and is directly responsible to the transportation command ACofS, movements, to perform the following functions:

(1) Determines for the planning period the total theater army requirements for movement of freight and personnel and origin and destination of movements.

(2) Determines for the planning period the transport capabilities by mode type and availability.

(3) Verifies and analyzes the capabilities of actual and potential transport users to ship and receive traffic by each mode or combination of modes.

(4) In coordination with the theater army support command (TASCOM) supply and maintenance command materiel management center, develops a distribution pattern for TASCOM.

(5) Conducts the movement planning meeting (chapter 7) to coordinate and resolve any priority conflicts (including those of the field army commander) and to prepare a movement plan. (Priority conflicts that cannot be resolved in consonance with theater directives are referred to the transportation command ACofS, movements.)

(6) After coordination of the movement plan with mode operators, supply managers, and the field army support command (FASCOM) MCC and approval of the plan by the transportation command ACofS, movements, publishes the movement program and distributes it to the field.

(7) Reviews and analyzes nonprogramed movements to determine if they are of a recurring nature and should be programed.

(8) Based upon reports submitted by field activities and upon in-transit data, reviews and analyzes program performance data to identify problem areas and to recommend required corrective actions.

(9) Reviews new or changed directives of higher headquarters to assess their effect on the movement system, recommends to the transportation command ACofS, movements, procedures for implementing the directives, and prepares supplementary instructions.

(10) Prepares transportation and movement plans and annexes to support the TASCOM logistic and contingency plans.

(11) Negotiates for and procures allied and host nation transportation as directed by the transportation command.

(12) Recommends movement management procedures that provide a smooth-working interface with continental United States and field army transportation activities.

(13) Performs internal management and funding functions for the MCA.

(14) Maintains the technical intelligence file and acts as coordinator of transportation intelligence.

(15) Exercises staff responsibility for collection, interpretation, and dissemination of transportation and traffic management intelligence within the agency.

(16) Exercises staff supervision relating to issuance of security clearances.

(17) Conducts periodic security inspections of movement control elements to insure compliance with existing security directives.

(18) Develops, publishes, and updates security access rosters.

(19) Procures and distributes maps required by the agency.

(20) Is the custodian for all US and treaty organization classified documents for the agency.

(21) Controls the flow of classified documents within the agency.

(22) Is the security control office for the agency.

(23) Serves as the focal point in the headquarters for matters concerning modification tables of organization and equipment, tables of distribution and allowances, and related authorization documents; command inspections; and the assignment, attachments, and reorganization of units within the MCA.

b. The *chief movement plans supervisor*, the *freight movement planning supervisor*, the *senior movement specialist*, and the *movement specialist* assigned to this division are all movement specialists. Movement specialists are also assigned to the mission elements of the MCA and of the MCC's at FASCOM and the corps support brigade and to all field teams. Since the duties of these personnel are generally the same wherever they are assigned, they are discussed in a separate paragraph of this chapter in terms of this general employment (para 2–11).

c. The *intelligence noncommissioned officer* is the principal operator within the MCA in matters concerning friendly and enemy intelligence, security, and counterintelligence. In carrying out his responsibilities, he acts within policies and procedures set forth by the transportation command ACofS, security, plans, and operations, as implemented by the agency commander. His duties include but are not necessarily limited to the following:

(1) Advises the command concerning intelligence and security matters.

(2) Receives transportation intelligence from higher headquarters and, of particular significance, from such sources as transportation field activities, local civilians, civil authorities, civil affairs personnel, and military police.

(3) Analyzes and evaluates the effect of friendly and enemy intelligence information upon the movement system (how it will affect the operations of modes and the use of the area and its transportation resources).

(4) Prepares intelligence information for dissemination to the FASCOM MCC, field agencies of the TASCOM MCC, shipping and receiving agencies, mode operators, and other interested agencies.

2–8. Freight Movement Division and Passenger Movement Division

(fig 2–1)

The duties of personnel assigned to the freight movement division and to the passenger movement division are basically the same for their respective areas of responsibility. Since the primary difference is that one deals with freight movements and the other with passenger movements, the two divisions are discussed jointly to avoid repetition. The freight and passenger movement divisions are primarily concerned with carrying out and monitoring the freight and passenger portion of the movement program. In each division personnel assigned include transportation movement officers, who advise and assist the division chief and carry out basically the same functions with relation to their respective areas of specialization. Duties of enlisted movement specialists and supervisory personnel are discussed in paragraph 2–11. Duties and responsibilities of assigned movement officers are discussed in terms of those of the division chief and include the following:

a. Acquires and maintains data concerning user requirements and mode capabilities and provides data input to the plans and programs division for planning and programing purposes.

b. Participates in the MCC movement planning meeting.

c. Maintains liaison and coordination with the TASCOM medical command, personnel command, and materiel management center (combines functions formerly performed by the inventory control center and the maintenance management center).

d. Coordinates with and assists counterparts in the FASCOM MCC.

e. Recommends changes in the movement program.

f. Recommends assignment and location of transportation movement offices (TMO's).

g. Recommends location of transport mode operating units.

h. Maintains a data collection point for statistics pertaining to division activities and functions.

i. Reviews and analyzes performance, progress, and program status and trends against approved or assigned missions, programs, and schedules and employment of physical resources in relation to performance.

j. Monitors and supervises activities of regional TMO's.

k. Makes staff visits to regions and TMO's to resolve problem areas.

l. Recommends policies and establishes procedures for the following major movement management actions (such procedures can normally be handled either manually or by automatic data processing):

(1) *Collection and dissemination of movement requirements and capabilities data.* To insure that this information is specific, timely, and accurate, continuous contact is maintained with every possible source, such as user staff agencies and field installations, transport facilities, and TMO's. An additional source which provides current and detailed information is the daily installation situation report (app E). TMO's are normally the primary source of the most current information.

(2) *Establishment of the movement release system.* This system applies only to transport resources employed to provide a common user, commandwide (or interzonal) service. The system permits the transportation movement officer the widest possible latitude in making adjustments at the local level and establishes procedures for maintaining close supervision of shipments from the initial request for transportation to delivery to the consignee. The system is carried out primarily by the transportation movement officer in the field through issuance of the transportation movement release as discussed and illustrated in paragraph 7–14.

(3) *Consolidation of shipments.* Shipments are most effectively consolidated by the shipping activity. However, the transportation service must provide consolidation and break-bulk distribution service (in addition to that provided by rear depots in TASCOM) geared to small-lot shipments and normally identified for specific consignees. The units to operate the consolidation and break-bulk points are designated by the TASCOM commander.

(4) *Holding in transit.* This action temporarily stops a shipment in order to eliminate or prevent congestion in the transportation system. It is taken only in coordination with the receiving agency and only for the period necessary to relieve the situation.

(5) *Diversion and reconsignment.* Diversion applies to any change made in the destination or consignee of a shipment en route; reconsignment applies to any change made after arrival of the shipment at destination.

(6) *Transferring.* This is an action that changes the shipment from one mode to another. Strategically located transfer points permit continuous and expeditious movement of shipments from origin to destination and reduce congestion in the transportation system.

(7) *Tracing and expediting.* Tracing is the procedure for locating a shipment en route or for confirming the forwarding or delivery of cargo. Except for baggage, tracing actions are initiated in accordance with the provisions of part IV, SOLOG agreement 31 (Revised) (app I). Accompanied baggage transported by air is traced as outlined in STANAG 3344 (app V). Expediting is any action that speeds the movement of the shipment. Both tracing and expediting are carried out by the TMO acting in conjunction with the mode operator.

(8) *Coordination with the Military Airlift Command and the Military Sealift Command.* The freight movement and passenger movement divisions are the primary contacts for the MCC with the Military Airlift Command (MAC) and the Military Sealift Command (MSC). The contact with MAC is established through the air terminal movement control teams LE and LF of TOE 55–580. With MAC, the freight and passenger movement divisions are responsible for coordinating channel and special mission airlift for personnel, unit, or cargo movements and for coordinating the schedules of Army airlift used in less-than-carload or lateral movement in the TASCOM area. Contact with the MSC is established directly with the local MSC office for cargo and passenger space requirements.

(9) *Coordination of Army Airlift.* Coordinates the schedule of Army airlift assigned or allocated to TASCOM.

(10) *Container control.* The freight movement division performs the theater container control functions. It maintains a running inventory by serial number, to include location and status of containers designed for, or customarily employed in movements between the continental United States and the theater, and for containers used in intratheater movements. This control is required to insure rapid return of con-

tainers to the distribution system, thereby permitting their most effective employment.

2–9. Special Movement Division (fig 2–1)

The *chief of the special movement division* is responsible for coordinating and monitoring those movements that require exceptional handling, monitoring, or reporting. *Transportation movement officers* and enlisted *movement supervisors* and *movement specialists* assist in carrying out division functions. Paragraph 2–11 discusses duties of movement specialists. Duties of assigned movement officers are discussed below in terms of those of the division chief:

a. Allocates the use of scarce special purpose equipment. Certain types of special purpose equipment may have to be allocated by the division to particular movements; for example, heavy duty, deep-well, or high-pressure tank railcars.

b. Provides a reporting system on use of the capabilities of the aviation service support companies assigned to the transportation command.

c. Coordinates and monitors large unit movements and accompanying equipment.

d. Coordinates and monitors shipments specified in AR 740–32 to be accompanied by technical escort (munitions safety control team) personnel.

e. Coordinates and monitors shipments requiring special handling such as dangerous, hazardous, and classified shipments.

2–10. Highway Traffic Headquarters (fig 2–1)

The highway traffic headquarters is responsible for planning and coordinating the use of the controlled road net [1] in the communications zone, and all units or activities requiring the use of controlled routes must obtain a clearance from the highway traffic headquarters before such use. Highway regulating points in the field carry out the traffic regulation plans developed by the headquarters. The highway traffic headquarters is normally collocated with the MCC of the agency, and is under the operational control of the transportation command ACofS, movements. The highway plans officer is the chief of the headquarters, with additional transportation and military police personnel assigned to complete his staff. Duties and responsibilities of the highway traffic headquarters include the following:

a. The *highway plans officer* directs the overall activities of the highway traffic headquarters, planning and providing for efficient and effective use of highways and motor transport equipment in transportation operations. He has the following responsibilities:

(1) Prepares and puts into effect detailed plans for highway transport operations.

(2) Assures necessary coordination with the divisions of the MCC.

(3) Coordinates highway planning activities with his counterpart in allied and host nation forces, with civil affairs personnel, and with civilian officials of the host nation.

(4) Coordinates the planning and execution of interzonal highway movements with the FASCOM MCC.

b. The *highway traffic engineer* plans vehicular traffic routing and circulation. As a basis for planning, he collects and maintains current information concerning such matters as—

(1) Roadway conditions.

(2) Traffic congestion points.

(3) Traffic capabilities of road surfaces, bridges, stream fording sites, etc.

(4) High-accident-rate areas.

(5) Projected traffic loads and their impact upon trafficability of the roads under consideration over a specific period of time.

(6) Enemy action and its impact upon highway movement.

(7) Alternate routes and contingency highway traffic plans.

c. The *traffic control officer* is responsible to the chief of traffic headquarters to—

(1) Assist military police units and highway traffic regulating teams in daily traffic control activities in the field.

(2) Prepare and update the traffic control plan.

(3) Provide traffic control information to the supporting military police activities and the highway regulating teams.

(4) Gather and disseminate data concerning road and traffic conditions.

(5) Coordinate security matters involving highway movements.

d. The *assistant highway plans officer* is responsible to the highway plans officer to—

(1) Coordinate requests for highway routing and scheduling of itineraries and movements.

[1] A controlled road net includes the main supply routes and certain essential feeder routes, the use of which is subject to traffic or movement restrictions as set forth in STANAG's 2041 (app K) and 2151 (app M).

(2) Schedule highway movements.

(3) Within established theater priorities and policies, determine priorities of movements over the road net.

(4) As appropriate to the situation, recommend changes in routings, schedules, and traffic priorities.

e. The *highway operations sergeant* is responsible to—

(1) Maintain a situation map of the road network.

(2) Prepare and issue the traffic circulation map.

(3) Coordinate highway routing and schedules.

(4) Supervise the enlisted members of the highway traffic headquarters.

f. Duties of the *traffic control sergeant* include the following:

(1) Compile, maintain, and disseminate statistical data relative to the use of the highway network.

(2) Establish and maintain a traffic control situation map.

(3) As directed, supervise the preparation of records, reports, and messages pertaining to traffic control operations.

g. The *movement specialists* assigned to this division perform functions related to highway control as discussed in paragraph 2–11.

2–11. Movement Specialist

a. The movement specialist is the enlisted expert in the field of movement control and is assigned at all levels in the theater army movement control system. Regardless of his assignment, the skills and knowledge that the movement specialist must possess are essentially the same, and his duties generally vary only with relation to the mission of the unit to which he is assigned and the position he occupies within the unit. As an example, the movement specialist in the plans and programs division of the MCA will be concerned primarily with theater army level staff planning and programing activities and related actions, whereas the movement specialists assigned to field teams will be primarily involved with transport users and operators in the day-to-day action necessary to satisfy the movement requirements of shippers and consignees located in a particular area of responsibility. However, each requires a sound working knowledge in such technical areas as—

(1) Organization, mission, and functions of the various elements of the movement control system.

(2) Principles of movements.

(3) Movement planning and programing procedures.

(4) MILSTAMP and its application to movements in an oversea theater.

(5) Derivation, purpose, and application of transportation priorities.

(6) Derivation and use of the transportation control number.

(7) Movement documentation procedures and military standard marking of shipments.

(8) Policies and procedures followed in controlling movements in an oversea theater.

(9) Characteristics, utilization, and relative cost effectiveness of modes of transport and their application in the selection of the mode appropriate to the movement requirement.

(10) Records and reports, their compilation, use, and disposition.

(11) Interrelationships of movement control personnel, mode and facilities operators, shippers and consignees, and movement control counterparts in other services and host and allied nations.

b. In addition to the required technical skills and knowledge set forth above, the movement specialist must be qualified in such related skills as—

(1) Use of the phonetic alphabet.

(2) Operation and driver maintenance of vehicles organic to the movement control unit.

(3) Radio and telephone procedures and operation of the radioteletypewriter.

(4) Use and care of the typewriter and office calculating machines.

c. Depending upon his assignment within the theater movement control system, the movement specialist may be required to perform or assist in performing the following functions:

(1) Assists in developing plans and programs for the movement of supplies by rail, water, highway, and air.

(2) Determines the transportation capabilities and limitations of transport modes within a given geographical area of responsibility.

(3) Makes recommendations concerning selection of transport modes to meet movement requirements.

(4) Reviews transportation control and movement documents for correctness and completeness and, as required, initiates corrective actions.

(5) Arranges for movement clearance for convoys, outsize shipments, and cargo requiring

special handling (classified, sensitive, or explosive cargo).

(6) Compiles for publication and updates the facilities and services guide.

(7) Reviews daily installation situation reports to determine such matters as whether transport equipment is being loaded or unloaded as scheduled, whether the installation is being overloaded and jammed up, the equipment that can be released for other uses, and similar information. As appropriate, takes or recommends follow-on action.

(8) Monitors reports of shipments and of completed transactions to assure their being accomplished.

(9) Develops cost data as a basis for improving cost effectiveness of movement management.

(10) As directed, compiles, analyzes, and maintains statistical data as a record of movement performance and as a basis for identifying areas requiring special attention.

(11) Maintains statistical and location data for container movements en route to, within, or departing the theater.

(12) Participates in technical assistance and staff visits with subordinate movement control units and teams, shippers and consignees, mode operators, other services, and movement control activities of host and allied nations. These visits are designed to determine the adequacy and effectiveness of movement control policies and procedures and to provide assistance in maintaining effective movement management.

(13) As directed, prepares recurring and special reports.

(14) Receives and processes requests for highway routing and movement schedules.

(15) Prepares traffic circulation plans, road movement graphs, and road movement tables.

(16) Maintains and disseminates information concerning traffic and roadway conditions.

(17) Coordinates highway movements from origin to destination, recommending changes in schedules as required to satisfy priorities of movement.

(18) Coordinates the clearance of Army cargo and personnel from the Air Force air terminal and the arrival at the air terminal of resupply cargo, retrograde material, and personnel.

(19) Monitors movement priorities and makes recommendations concerning challenges of priorities, emplacing of embargoes, and diversion or reconsignment of shipments.

(20) Initiates tracing action to locate missing shipments and takes action to satisfy movement requirements for frustrated shipments.

(21) Coordinates the arrival and spotting of transport equipment for loading and unloading at the time and place mutually agreeable to the transport service and the user.

(22) As required, advises and supervises for efficient handling, loading, and unloading of transport equipment.

(23) Advises the transport user concerning any aspect of movements in which the user requests or demonstrates the need for assistance.

d. As the movement specialist advances to supervisory positions, he assumes the added duties of planning, organizing, and supervising the movement control activities of subordinates; assigning tasks; establishing work priorities; preparing work and distribution flow charts; preparing job descriptions and standing operating procedures; conducting and supervising on-the-job training; and performing similar functions of a supervisory nature. Additionally, as provided for in AR 614–200, he should seriously consider applying for acceptance in the noncommissioned officer logistic program (NCOLP).[2] Under this program, he receives schooling designed to further broaden his knowledge in the field of logistics and thereby, in addition to increasing his value to the service, to promote his own opportunities for career advancement.

[2] Movement control supervisory personnel accepted as members of the NCOLP have the letter "K" as the fifth digit of this MOS number.

Section III. COMMUNICATIONS

2–12. General

Currently, oversea theaters have punchcard machines and several types of computers (programed in different languages) that perform portions of the movement functions. For example, US Army, Europe, uses computers for checking on past transportation performance, determining requirements for passenger transportation, and programing transportation service workloads. Current and interim procedures for the use of existing automatic data processing equipment (ADPE) are discussed in FM 55–10,

and full use should be made of this equipment wherever it may be available and adaptable. When the necessary ADP system does become available for field use, a transportation command ADP unit will support the movement control center (MCC) and highway traffic regulation activities. It is for this reason that the use of the 80-column punchcard in the preparation of the transportation control and movement document has been included in appendix C. Meanwhile, implementation of a standardized ADP system for Army transportation is not scheduled until about 1975. For that reason, this discussion primarily considers communications equipment currently available and compatible between units and with other services.

2–13. Communications Requirements

a. Rapid and responsive communication is the key to an efficient and effective theater movement control system. As noted in the preceding paragraph, acceptable movement communications will be realized with the implementation of a standardized Army transportation ADP system and related equipment. Until that time, however, movement control activities must make the most of currently available equipment and strive to minimize such degradation in responsiveness as may result under the manual system. Because of the requirement for hard copy secure communications, current movement control operations depend primarily upon landline teletype that nets through the theater army communications system (TACS). This service is currently provided by a signal operations company, small headquarters, which is located with the transportation command. (Backup is provided by telephone, radio, mail, or courier.) The requirement for TACS sole user circuits for communication between the various elements of the transportation movement control agency is best determined in the field. It is possible that reserved time on circuits at specific hours of the day may suffice for a portion of the communications traffic. There may be requirements for sole circuit communication between the TASCOM MCC and the materiel management center, the FASCOM MCC, and the air terminal movement control team. The use of priority traffic may suffice for the remainder of movement management communications requirements. Figure 2–2 indicates the primary communications requirements for the transportation movement control agency.

b. Modern, rapid intertheater movements—both by air and sealift—result in correspondingly increased emphasis on the need for hard copy communications means between the TASCOM MCC, the Military Sealift Command, and the Military Airlift Command.

c. In addition, intratheater airlift requires immediate transmission of reports of shipment between the air terminal movement control team, the MCC, and possibly, the regional transportation movement office (TMO). Further, a basic hard copy secure communications requirement exists for use by the MCC in transmitting the movement program to regional TMO's, TMO's, air traffic movement control teams, and the transport services. Changes to the movement program and emergency movement requirements are transmitted to the same elements.

d. Additional communications requirements are generated by—

(1) Transmission of the daily installation situation report (status of shipments made, received, or on hand) from the shipper and mode operators through the TMO to the MCC. In addition—primarily in the field of air shipments—the handling of "tracer" messages having urgent requirements is commonplace.

(2) Resupply requirements which are transmitted through supply channels to the materiel management center, which communicates directly with the MCC and may require sole user circuits. These shipments are normally on a programed basis.

(3) Emergency supply shipments which are generated at the materiel management center are transmitted through the MCC to a TMO and then to the transport service. Additionally, the materiel management center transmits these requirements direct to the shipping activity.

(4) Reports of shipment made by the TMO at the shipping activity immediately after shipment and transmitted through the regional TMO or MCC to the receiving TMO. (In the case of air shipments, depending upon the distances involved, the reaction time must be within 30 to 60 minutes for intratheater shipments and 15 to 20 minutes for intraarmy shipments.)

(5) Passenger movements, which normally are made by intertheater, intratheater, and intraarmy airlift. Programing, scheduling, and reporting of passenger movements must be made by a rapid, secure communications system. Transmission time requirements for personnel shipments are as shown in (4) above.

e. Communications are further discussed in chapter 8.

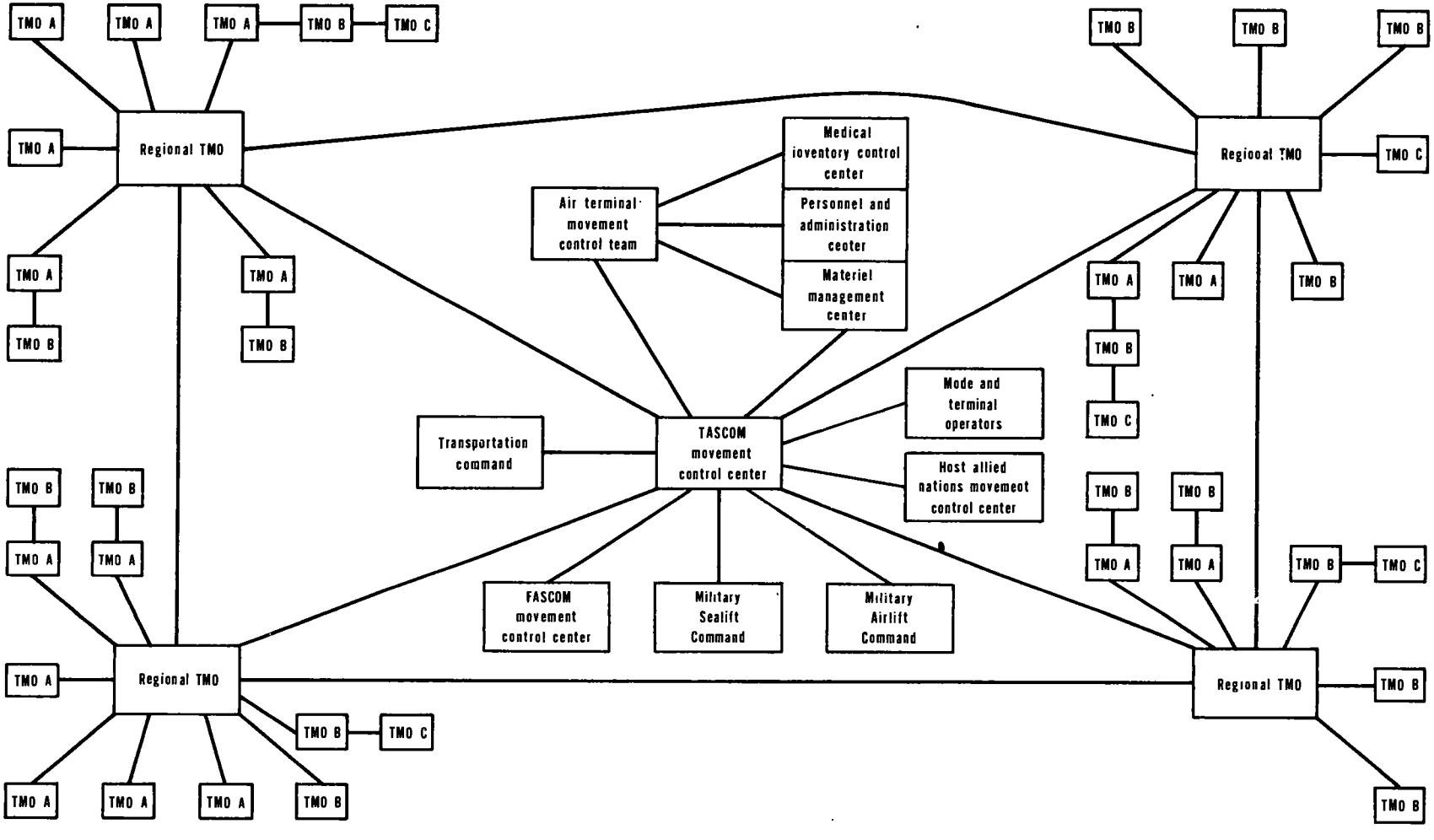


Figure 2-2. Communications requirements, transportation movement control agency.

2–14. Movement Control Agency Internal Communications

The internal communications system for the transportation movement control agency consists of telephone.

CHAPTER 3

TRANSPORTATION MOVEMENT CONTROL CENTER

(FIELD ARMY SUPPORT COMMAND) (TOE 55–6)

Section I. ORGANIZATION, MISSION, CAPABILITIES, AND FUNCTIONS

3–1. Organization
(fig 3–1)

The field army support command (FASCOM) transportation movement control center is organized along functional lines to include a unit headquarters and a mission element composed of a movement control center and a highway traffic headquarters. Teams are attached to the center to perform movement control and highway regulation functions in the field.

a. The *unit headquarters* provides the unit with limited housekeeping support consisting primarily of unit administration, supply, and clerical support. Mess, vehicle maintenance, personnel services, and finance support come from adjacent units designated by the FASCOM headquarters commandant.

b. The *movement control center* (MCC) of the unit provides the organization for planning and monitoring the execution of the command movement program, advising the FASCOM assistant chief of staff (ACofS), movements, concerning transportation movement matters, and maintaining information and records concerning the status of transportation movement activities throughout the command. The FASCOM ACofS, movements, exercises staff supervision over the MCC, and the senior officer assigned to the movement control center element of the movement control center unit commands the unit and all attached TMO's.

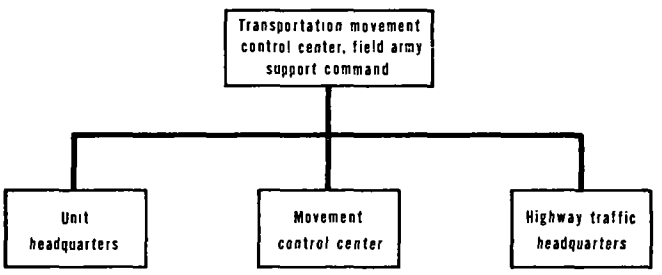


Figure 3–1. Organization of the transportation movement control center (field army support command).

c. The *highway traffic headquarters* provides personnel to plan and regulate highway traffic movements in the field army service area, operating under the staff supervision of the FASCOM ACofS, movements.

d. As with the TASCOM movement control agency (para 2–1), *transportation movement offices* (TMO's) and *highway regulating teams* are attached to the FASCOM MCC to extend the functions of movement control and highway regulation into the field. A primary difference between the TASCOM organization and that of the FASCOM is that, although the FASCOM may employ regional teams, its requirements are usually limited to TMO's A, B, and C. (See chap 5 for a discussion of these teams.)

3–2. Mission and Assignment

a. The mission of the FASCOM MCC is to—

(1) Command and supervise attached or assigned units and teams engaged in movement control and highway regulation in the field army service area.

(2) Provide movement management for the movement of personnel and materiel (except bulk petroleum moved by pipeline) within, into, or out of the FASCOM area of responsibility.

(3) Provide highway regulation services within the FASCOM area of jurisdiction.

(4) Maintain liaison, as required, with transportation elements of other US forces and with allied and host nation transportation agencies.

b. The movement control center is assigned to the FASCOM headquarters; it is not further attached to the transportation brigade. Note that this is a major difference from TASCOM, where the movement control agency is attached to a

major subordinate command of TASCOM—the transportation command.

3–3. Mobility

Organic vehicles of the FASCOM MCC provide the unit with approximately 50-percent mobility. Approximately five additional 2½-ton trucks with 1½-ton trailers are required to displace the unit in one move.

3–4. Capabilities

a. The FASCOM transportation MCC unit has the capability to—

(1) Provide a central organization and the field offices required to perform movement control services in support of a field army (requires augmentation by TMO's from TOE 55–580).

(2) Provide a central organization and field offices required to perform highway regulating services in support of a field army (requires augmentation by highway regulating teams from TOE 55–540).

b. This unit is dependent upon—

(1) Adjacent units for messing, organizational maintenance, personnel and medical services, and finance support—the FASCOM headquarters designates the units to provide this support.

(2) The centralized automatic data processing facilities of FASCOM for automated support of the MCC and the highway traffic headquarters activities (contingent upon availability of necessary equipment).

3–5. Functions

The functions of the FASCOM movement control unit with respect to the field army service area generally parallel those of the TASCOM movement control agency with respect to the communications zone (COMMZ). The FASCOM movement control unit is responsible for initiating and carrying out the planning, programing, and regulative actions required for the management of transportation movements in support of the field army. As noted in paragraph 3–1*a*, the unit headquarters provides limited administrative support to the unit, its purpose being primarily to command the enlisted members and to secure, coordinate, and monitor the support services provided by adjacent units. Mission-related functions are the responsibility of the MCC and the highway traffic headquarters and include the following—

a. Carrying out the movement management policies and regulations established by the FASCOM headquarters and, as required, establishing implementing policies and procedures.

b. Developing and publishing the FASCOM movement program based on movement requirements submitted by field army and FASCOM activities and on information from the TASCOM MCC concerning personnel and materiel that will be shipped from the COMMZ into or through the field army area.

c. In accordance with policies and priorities established by the FASCOM commander, allocating armywide transport capabilities of the FASCOM transportation brigade and those facilities of the TASCOM interzonal transportation service (or of any other source) allocated to FASCOM for its use.

d. Participating in the TASCOM movement planning activities by—

(1) Presenting the field army commander's priorities for consideration by the TASCOM MCC in its planning for personnel and materiel movements which do not originate in the field army command but which do have an impact on field army movement management.

(2) Providing the TASCOM MCC with FASCOM requirements for—

(*a*) US motor transport when field army transport is insufficient to meet requirements.

(*b*) Host or allied nation highway transport when there is insufficient field army transport to meet requirements.[1]

(*c*) Air movement by allocated US Air Force airlift.

(3) Presenting the capabilities of activities in the field army area to accept throughput shipments.

e. Planning, coordinating, and monitoring all throughput shipments originating in, or passing through, the army service area from their origin to their final destination.

f. Determining the requirements for and physical location in the field army area of transportation movement offices and highway regulating points.

g. Commanding and supervising attached teams engaged in movement control and highway regulation.

h. As directed, preparing and submitting to higher headquarters, statistical data and reports concerning transportation movement management activities in the field army.

i. Exercising technical supervision over the activities of the corps support brigade MCC.

[1] When the FASCOM ACofS, movements, has established a combined movement center, such requests are placed directly on the host nation or allied force military counterpart within the combined movement center (refer to FM 55–10 for a discussion of the combined movement center).

j. Providing highway planning and regulation service within the command's area of jurisdiction for both tactical and logistical highway movements.

k. Maintaining liaison, as required, with transportation elements of other US forces and with allied and host nation transportation agencies.

l. Maintaining continuous liaison and coordination with the military police brigade.

m. Maintaining liaison with civilian authorities and civil affairs activities within the command's area of jurisdiction.

n. Coordinating and monitoring movement of TASCOM transport operating in or through the field army area.

o. Coordinating and monitoring movement of retrograde cargo from the field army area.

p. Receiving and relaying to the TASCOM MCC information concerning the use, location, and status of containers used in intratheater transport of cargo.

q. Monitoring and coordinating the use of containers.

Section II. DUTIES OF KEY PERSONNEL

3–6. Transportation Movement Control Center Unit Headquarters

The following is a discussion of the key personnel in the headquarters and of their principal duties and responsibilities. To eliminate duplication, reference is made to the discussion of duties of their counterparts in the theater army support command (TASCOM) movement control agency where appropriate.

a. The *headquarters commander* is responsible for administrative and logistic support of the movement control center and its field teams. With certain exceptions, which are a reflection of the limited size of the command, duties and responsibilities of the headquarters commander generally parallel those discussed in paragraph 2–6*a*.

b. The *first sergeant* is the principal assistant to the commander and assumes command of the headquarters in the absence of the headquarters commander. The duties of the first sergeant are discussed in detail in paragraph 2–6*d*.

c. The *supply sergeant* administers the unit supply system and supervises the headquarters armorer. Duties of the supply sergeant are generally as discussed in paragraph 2–6*g*.

3–7. Movement Control Center

Duties and responsibilities of personnel assigned to the movement control center (MCC) generally parallel those of the TASCOM MCC personnel. The primary difference, as will be noted upon examination of the organization for the two MCC's, is that in the FASCOM MCC all movement management functions are combined in one element of the unit, rather than being functionalized among several divisions as is done in the TASCOM MCC. Additionally, the movement control element in the FASCOM MCC contains the communications center, whereas the TASCOM movement control agency has the communications center in the agency headquarters. The FASCOM movement control officer is the senior officer, and he commands the movement control center. He is assisted in operation of the center by assigned movement control planning staff officers and by enlisted movement specialists and supervisory personnel, and assigns responsibilities to the control center personnel as he considers appropriate. Inclusion of a deputy FASCOM movement control officer permits 24-hour operation of the center. (When a combined movement center is established in the field army (FM 55–10), the deputy is normally its chief.)

a. The *FASCOM movement control officer* is responsible to plan, direct, and supervise those movement management activities of the MCC outlined in paragraph 3–5. Additionally, he maintains status information concerning freight and passenger movement activities, investigates delays and initiates corrective action, and maintains and forwards records and reports as directed by the FASCOM commander.

b. The *communications chief* is responsible to the FASCOM movement control officer to establish and maintain communications for the movement control center. His duties and responsibilities are essentially the same as those outlined in paragraph 2–6*f*.

3–8. Highway Traffic Headquarters

The highway traffic headquarters of FASCOM operates under the control of the FASCOM assistant chief of staff, movements. Its organization is identical to that of the TASCOM highway traffic headquarters. Representatives for construction, maintenance, and communications-electronic support are provided to the traffic headquarters by the command when required

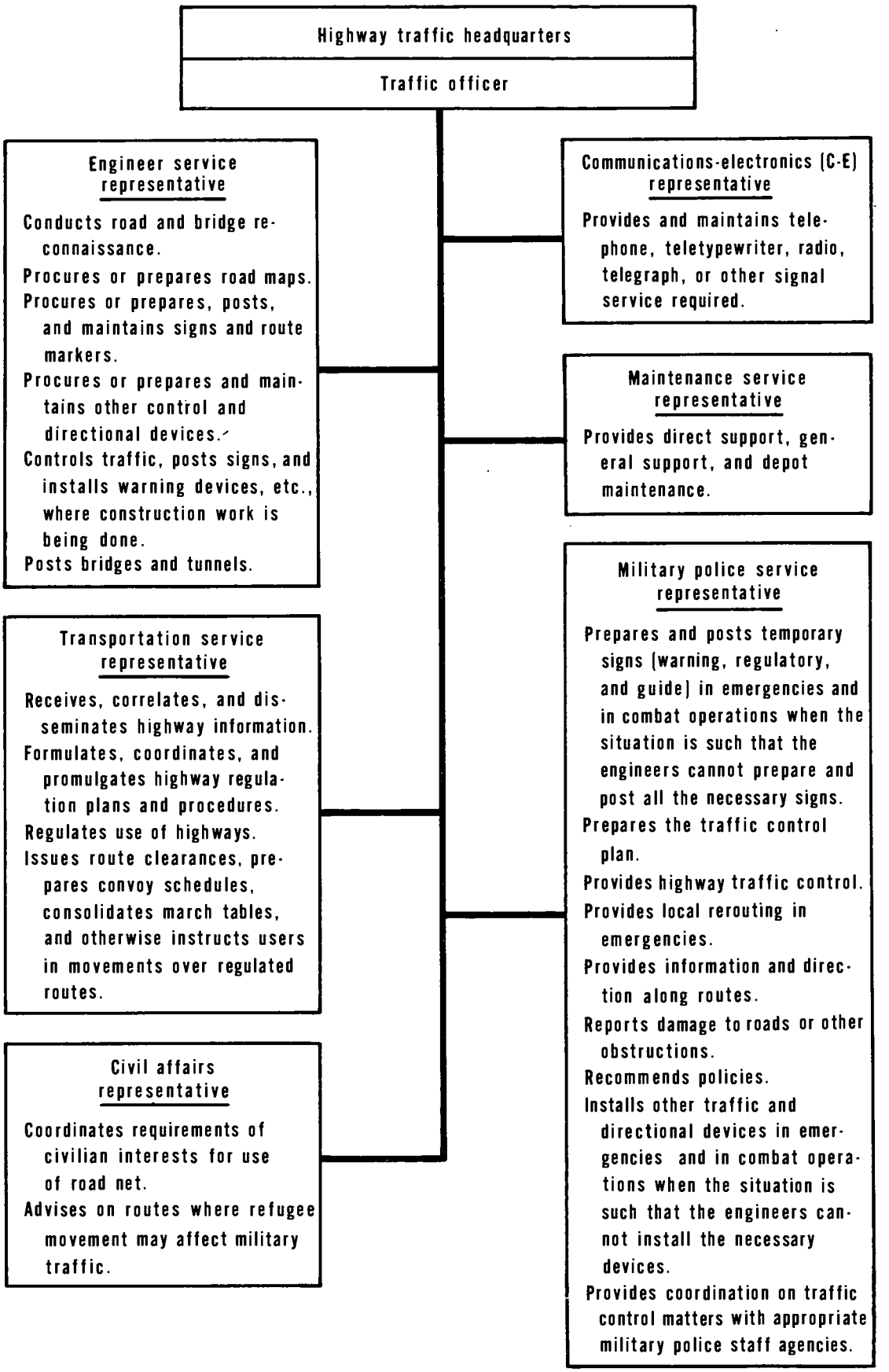


Figure 3–2. Coordination actions within a highway traffic headquarters.

for coordination in matters that are the primary responsibilities of their respective services. The overall plan for highway regulation is formulated by the traffic headquarters and is coordinated with other staff agencies as shown in figure 3–2. Duties and responsibilities of personnel assigned to the FASCOM traffic headquarters parallel those of the TASCOM, as discussed in paragraph 2–10.

Section III. COMMUNICATIONS

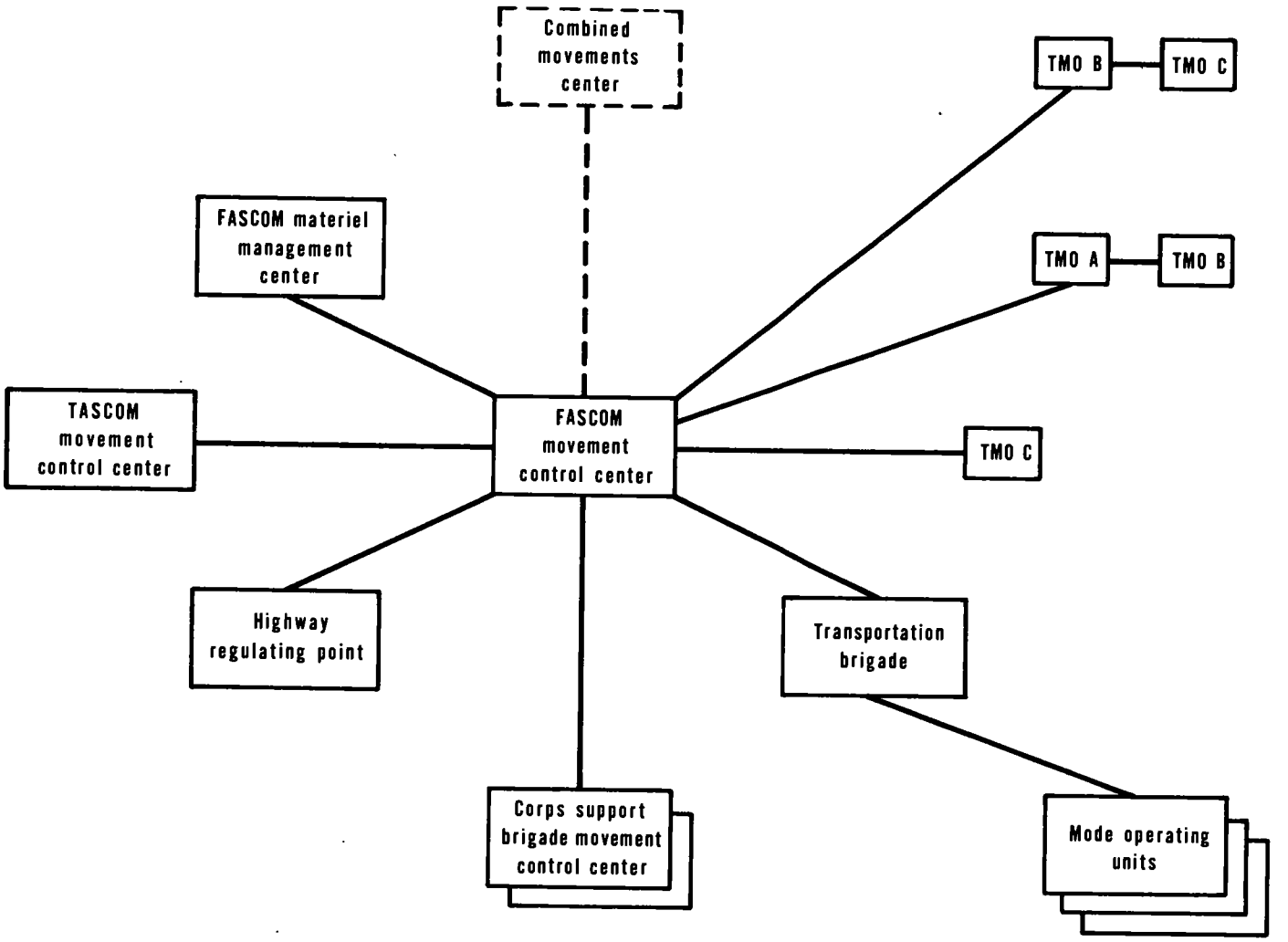
3–9. General

a. The discussion of movement control communications in the theater army support command (TASCOM), as presented in paragraphs 2–12 and 2–13, is also applicable to the field army support command (FASCOM), except that the FASCOM movement control center (MCC) normally has no requirement to communicate directly with the major commands in the theater army area. (The FASCOM MCC may require communication with the tactical air force (TAC) when TAC is providing intratheater airlift support.) Until implementation of a standardized ADP system, the FASCOM MCC depends primarily upon landline teletypewriter and radioteletypewriter. Landline teletypewriters are not authorized by current TOE; however, if the requirement for such equipment arises, the unit commander may submit a modification TOE (MTOE) to provide for this equipment. Backup communications support includes telephone (which nets through the unit switchboard with the area communications system), mail, and courier. Additionally, two ¼-ton truck-mounted radios are authorized for voice transmission. These two sets—one in the MCC and the other in the highway traffic headquarters—permit entry into the radio-wire integrated (RWI) system. Figure 3–3 indicates the primary communications requirements for the FASCOM MCC.

b. Communications are further discussed in chapter 8.

3–10. Internal Communications

The internal communications system for the transportation movement control center, field army support command consists of telephone.



Note: A combined movements center is established when US Army forces participate in a combined operation where a status of forces or other international agreement between the United States and the host nation is in effect.

Figure 3–3. Communications requirements, transportation movement control center (field army support command).

CHAPTER 4

TRANSPORTATION MOVEMENT CONTROL CENTER

(CORPS SUPPORT BRIGADE) (TOE 55–7)

Section I. ORGANIZATION, MISSION, CAPABILITIES, AND FUNCTIONS

4–1. Organization
(fig 4–1)

The corps support brigade movement control center is organized along functional lines to include a detachment headquarters and a mission element made up of a movement control center and a highway traffic headquarters. Teams are attached to the center to perform movement control and highway movement regulation functions in the field.

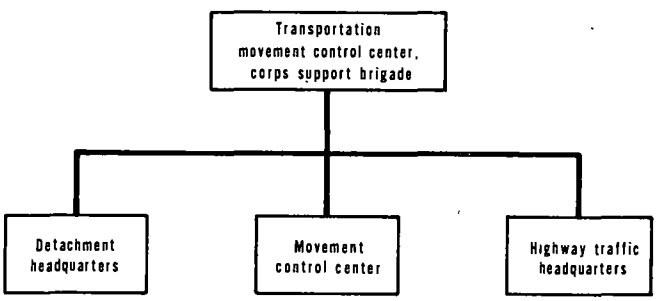


Figure 4–1. Organization of the transportation movement control center (corps support brigade).

a. The *detachment headquarters* provides the unit with limited housekeeping support, consisting primarily of unit administration, supply, and clerical support. The movement control center is dependent upon adjacent units for mess, vehicle maintenance, personnel services, and finance support. Normally, the headquarters commandant of the corps support brigade designates the units to provide this support.

b. The organization of the corps support brigade *movemet control center* (MCC) is essentially the same as that of the field army support command (FASCOM) MCC, the primary difference being that the corps support brigade MCC has fewer personnel assigned. The corps support brigade MCC operates under the staff supervision of the corps support brigade assistant chief of staff (ACofS), movements, and is under the command and operational control of the chief movement officer, the senior officer assigned to the unit.

c. The corps support brigade *highway traffic headquarters* has the same organization as the FASCOM highway traffic headquarters, except that the former has slightly fewer assigned personnel. The corps support brigade highway traffic headquarters operates under the staff supervision of the corps support brigade ACofS, movements, and is under the command and operational control of the unit's highway plans officer.

d. Transportation movement offices (TMO's) and *highway regulating teams* are attached to the movement control center and employed at critical locations throughout the corps area to coordinate and monitor the movement program of the corps support brigade. As with the FASCOM MCC, the corps support brigade MCC does not normally employ regional TMO's but is limited to TMO's A, B, and C. (See chap 5 for a discussion of these teams.)

4–2. Mission and Assignment

a. The mission of the corps support brigade movement control center unit is to—

(1) Command and supervise attached or assigned units and teams engaged in movement control and highway regulation.

(2) Provide movement management for the transport of personnel and materiel (except bulk POL by pipeline) within, into, or out of the corps area.

(3) Provide highway regulation services within the corps area of jurisdiction.

(4) Maintain liaison, as required, with transportation elements of other US forces and host and allied nations.

b. This unit is assigned to a corps support brigade headquarters.

Note. When the army rear support brigade is provided transportation over which it has allotment authority, movement management is provided to the brigade by the FASCOM MCC and its subordinate TMO's.

4–3. Mobility

Organic vehicles of the corps support brigade MCC unit provide the unit with approximately 20-percent mobility. Approximately four additional 2½-ton trucks with 1½-ton trailers are required to displace the unit in one move.

4–4. Capabilities

a. The corps support brigade MCC unit has the capability to—

(1) Provide a central organization and the field offices required to perform movement control services in support of a corps (requires augmentation by TMO's from TOE 55–580).

(2) Provide a central organization and the field offices required to perform highway regulating services in support of a corps (requires augmentation by highway regulating teams from TOE 55–540).

b. The unit is dependent upon—

(1) Adjacent units for messing, organizational maintenance, personnel services, and finance support—the corps support brigade headquarters designates the unit to provide this support.

(2) The centralized automatic data processing facilities of the corps support brigade for automated support of the MCC and highway traffic headquarters (contingent upon the availability of necessary equipment).

4–5. Functions

The functions of the corps support brigade MCC unit generally parallel those of the FASCOM MCC unit, although on a reduced scale. The detachment headquarters performs limited housekeeping functions and secures, coordinates, and monitors those support services provided the center and its field offices by adjacent units. Mission-related functions are the responsibility of the movement control center and the highway traffic headquarters and include the following—

a. Planning, programing, and monitoring transportation movement management activities in support of the corps.

b. Implementing those portions of the FASCOM movement program that require shipment by support brigade transportation.

c. Developing and publishing the support brigade movement program. In addition to requirements forecast by support brigade transport users, the program also includes any portions of the FASCOM movement program that pertain to shipments from installations within the corps area or that use transport capability of the corps support brigade.

d. Submitting requirements to the FASCOM MCC for transport beyond the movement capability of the support brigade (includes US Air Force or US Army air transport).

e. Allocating the movement capability of transport units assigned or attached to the corps support brigade.

f. Establishing transportation movement offices and highway regulating teams as required in the support brigade area and supervising team activities.

g. As directed, preparing and submitting to the support brigade headquarters and the FASCOM MAC, statistical data and reports concerning transportation movement management activities in the support brigade area.

h. Providing highway planning and regulation service within the corps area of jurisdiction for both logistical and tactical highway movements.

i. Maintaining continuous liaison and coordination with the military police battalion assigned to the corps support brigade.

Section II. DUTIES OF KEY PERSONNEL

4–6. Transportation Movement Control Center Detachment Headquarters

The duties of key personnel in the corps support brigade transportation movement control detachment headquarters parallel those discussed in paragraph 3–6 for the field army support command (FASCOM).

4–7. Movement Control Center

Duties of key personnel in the movement control center essentially parallel those discussed in paragraph 3–7 for FASCOM.

4–8. Highway Traffic Headquarters

Duties of key personnel in the highway traffic

headquarters essentially parallel those discussed in paragraph 3–8 for FASCOM. It is particularly important that there be close coordination of highway planning and regulation between the support brigade traffic headquarters and the traffic headquarters established at divisions.

Section III. COMMUNICATIONS

4–9. General

a. The discussion of movement control communications for the field army support command (para 3–9) is generally applicable to movement control communications in the corps support brigade. The support brigade is dependent primarily upon landline teletypewriter which has access to the area communications system. Backup support consists of the common-user telephone, mail, and courier service. Two vehicle-mounted radio sets, one in the movement control center (MCC) and the other in the highway traffic headquarters, provide voice communication and permit entry into the radio-wire integrated system. Figure 4–2 indicates the primary communications requirements for the corps support brigade MCC.

b. For an additional discussion of communications, see chapter 8.

4–10. Internal Communications

The internal communications system for the transportation movement control center unit, corps support brigade, consists of telephone.

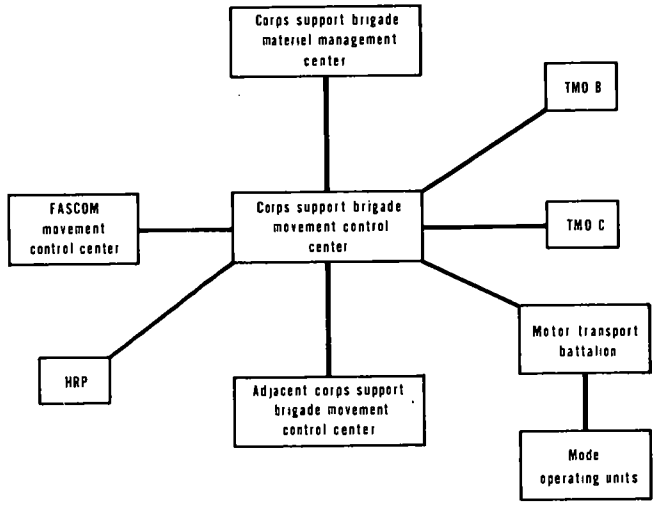


Figure 4–2. Communications requirements, transportation movement control center (corps support brigade).

CHAPTER 5

TRANSPORTATION MOVEMENT CONTROL TEAMS (TOE 55–580) AND HIGHWAY REGULATING TEAMS (TOE 55–540)

Section I. ORGANIZATION, MISSION, CAPABILITIES, AND FUNCTIONS

5–1. General

a. Movement control units may be augmented by attachment of movement control teams from TOE 55–580 and highway regulating teams from TOE 55–540.

(1) Transportation movement control teams provide the personnel and equipment to operate transportation movement offices (TMO's) as an extension of the functions of the movement control center (MCC) into the field. The TMO's, under the operational control of the MCC, are employed at critical areas throughout the communications zone (COMMZ), the field army service area, and the corps zone. Examples of sites at which a TMO may be employed include large transportation net complexes such as major cities; supply installations; highway, rail, water, and air terminals; equipment collection and classification points; consolidation and distribution points; intermode transfer points; and any other point where movement may require expediting or shippers or consignees may need assistance or advice.

(2) Highway traffic regulating teams operate highway regulating points at critical points in the road net. They are under the operational control of the highway traffic headquarters and are employed throughout the theater.

b. At this point it may be helpful to explain the letter designations of movement control teams as used in this discussion. Under the old TOE 55–4T, 55–6T, and 55–7T, TMO's were organic to the movement control unit. For example, the original TOE 55–4 included four regional TMO's, 21 TMO's A, 12 TMO's B, and 12 TMO's C; teams LA, LB, LC, and LD of TOE 55–580 provided augmentation to the organic TMO's or were used where the size of the operation did not require a TMO. However, under current TOE 55–4H, 55–6H, and 55–7H, the organic TMO's have been deleted and the TOE 55–580 teams are attached to the movement control unit as augmentation as required. The previous TMO's and the current teams can be equated as follows:

TMO's under obsolete TOE 55–4, 55–6, and 55–7		*Movement control teams under TOE 55–580*
Regional TMO	equates with	team LD, movement control (region)
TMO A	equates with	team LC, movement control
TMO B	equates with	team LB, movement control
TMO C	equates with	team LA, movement control

5–2. Organization

a. Team LD, Movement Control (Region) (fig 5–1). To reduce the span of control of the MCC, that portion of the COMMZ through which the transportation system runs is normally divided into transportation movement regions.[1] The number and size of the regions vary with the volume and complexity of movements, the number of critical areas, and the geographical spread of the transportation system. A regional TMO (team LD, movement control) is established in each region and is responsible to the MCC for controlling and supervising all movement matters pertaining to that portion of the interzonal system that passes through that territorial area.

b. Team LC, Movement Control (TMO A) (fig 5–1). Movement control team LC is established at such activities as a general depot, water terminal, or rail or motor terminals. Additionally, if it becomes necessary to reduce the span of control of the regional TMO (team LD), the region may be further divided into districts and team LC established as a district TMO. In this

[1] If the size of the FASCOM area of responsibility and the complexity of its operations justify, the FASCOM may also be divided into regions.

TEAM LD, MOVEMENT CONTROL (REGION)
(REGIONAL TRANSPORTATION MOVEMENT OFFICE)

- Movement officer
- Assistant movement officer
- Freight movement officer
- Passenger movement officer
- Movement supervisor
- Assistant movement supervisor
- Senior movement specialist
- Movement specialist
- Communications center specialist

TEAM LC, MOVEMENT CONTROL
(TRANSPORTATION MOVEMENT OFFICE A)

- Movement officer
- Assistant movement officer
- Movement supervisor
- Assistant movement supervisor
- Senior movement specialist
- Movement specialist
- Communications center specialist

TEAM LB, MOVEMENT CONTROL
(TRANSPORTATION MOVEMENT OFFICE B)

- Movement officer
- Movement supervisor
- Senior movement specialist
- Movement specialist
- Communications center specialist

TEAM LA, MOVEMENT CONTROL
(TRANSPORTATION MOVEMENT OFFICE C)

- Senior movement specialist
- Movement specialist

TEAM LE, MOVEMENT CONTROL (AIR TERMINAL)

- Team commander
- Assistant team commander
- Liaison officer
- Medical supply officer
- Movement control officer
- Supply movement coordinating officer
- Personnel movement coordinating officer
- Chief movement control supervisor
- Medical supply movement coordinating NCO
- Movement control supervisor
- Personnel movement coordinating NCO
- General supply movement coordinating NCO
- Communications chief
- Movement control supervisor
- First cook
- Senior personnel movement coordinating specialist
- Senior movement control specialist
- Card punch operator
- Clerk typist
- Detachment clerk
- Personnel movement control specialist
- Communications center specialist
- Movement control specialist
- Light vehicle driver

TEAM LF, MOVEMENT CONTROL (AIR TERMINAL)

- Team commander
- Liaison officer
- Medical supply officer
- Movement control officer
- Supply movement coordinating officer
- Personnel movement coordinating officer
- Chief movement control supervisor
- Medical supply movement coordinating NCO
- Movement control supervisor
- Personnel movement coordinating NCO
- General supply movement coordinating NCO
- Communications chief
- Senior movement control specialist
- Personnel movement coordinating specialist
- Card punch operator
- Clerk Typist
- Detachment clerk
- Communications center specialist
- Movement control specialist
- Light vehicle driver

TEAM GG, HIGHWAY REGULATING POINT

- Highway traffic regulating officer
- Operations sergeant
- Assistant operations sergeant
- Senior movement specialist
- Movement specialist
- General clerk

Figure 5-1. Transportation movement control teams (TOE 55-580) and highway regulating teams (TOE 55-540).

case team LC (TMO A) is responsible to the regional TMO for controlling and supervising all movement matters pertaining to that portion of the interzonal transportation system that passes through the territorial area of the district.

c. Team LB, Movement Control (TMO B) (fig 5–1). Movement control team LB (TMO B) is established at such activities as small supply complexes, medium fixed water terminals, a two-ship logistics over-the-shore (LOTS) terminal, or an inland transfer point. If a district TMO (team LC) has been established, TMO B is responsible to the district office; if not, the B team operates under the direct control of and reports directly to the regional TMO.

d. Team LA, Movement Control (TMO C) (fig 5–1). Movement control team LA (TMO C) is established at such activities as intermode transfer points, small Army air terminals, specialized supply installations, or other activities which do not have sufficient size or operations to justify a larger team. Team LA may also be used to augment a larger team when the size of a particular operation warrants. In this case, it becomes to all intents and purposes an integral part of the augmented TMO. When employed separately, team LA (TMO C) reports to a district TMO (team LC) when they are established, otherwise to the regional TMO (team LD).

e. Team LE, Movement Control (Air Terminal) (fig 5–1). Movement control team LE is established at US Air Force air terminals that require coordination of through movements of Army cargo and personnel. This team is designed to provide movement management for a daily capability of 1,800 to 3,000 tons.

f. Team LF, Movement Control (Air Terminal) (fig 5–1). Movement control team LF is a lesser strength version of team LE, also used at US Air Force air terminals requiring coordination of through movements of Army cargo and personnel. Team LF is designed to provide movement management for a daily capability of up to 1,500 tons.

g. Team GG, Highway Regulating Point (fig 5–1). Highway regulating teams observe, follow, and report progress of vehicles along routes and adjust movement schedules as necessary. They work in conjunction with military traffic control points operated by the military police and are established at such locations as truck terminals, transfer points, crossroads, and other points where traffic may conflict or become congested.

5–3. Mission and Assignment

a. Transportation Movement Office.

(1) The mission of the TMO is to act as a coordinator between transport users and transport mode operators and to assist commanders in carrying out both programed and unprogramed movements. In the case of movement control teams LE and LF, the mission is specifically to coordinate the expeditious clearance of Army cargo and personnel from Air Force air terminals (to include both channel airlift and tactical air transport) and to coordinate the arrival at the air terminal of resupply cargo, retrograde material, and personnel.

(2) Movement control teams are assigned to the support command of a theater, field army, or corps support brigade and are normally attached to the appropriate transportation movement control unit.

b. Highway Regulating Point.

(1) The mission of the highway regulating point (HRP) is to carry out the field implementation of the highway traffic plan prepared by the highway traffic headquarters. In doing this, the HRP keeps the highway traffic headquarters advised concerning movements of convoys and other vehicles along the route and of current highway conditions and changes as they occur and makes appropriate recommendations concerning traffic regulation.

(2) Highway regulating teams are assigned to the support command of a theater, field army, or corps support brigade and are normally attached to the appropriate movement control unit.

5–4. Capabilities

a. Transportation Movement Control Teams. The capability of each of these teams is dependent upon the particular TOE paragraph under which it is organized. Each is capable of providing, within its size and communications limitations, 24-hour supervision, coordination, and monitoring of the movement program for the activity or area which it supports. The teams are capable of maintaining status information on shipments, investigating and taking necessary action to avoid delays in movements, and preparing movement instructions. A team requires personnel services, finance, supply, mess, and organizational maintenance service support from the unit to which it is attached.

b. Highway Regulating Team. The highway regulating team is capable of manning the highway regulating point to provide 24-hour supervision, coordination, and monitoring of highway traffic. It requires personnel services, finance, supply, mess, and organizational

maintenance service support from adjacent units, normally designated by the support command.

5-5. Functions

a. Transportation Movement Office. The functions carried out by the TMO depend upon the immediate situation and the type of activity or installation at which the TMO is located. However—and this cannot be overstressed—to function effectively, the TMO must make its presence and potentials known to transport users and operators within its area of responsibility. Additionally, it must prominently mark its location and identify its members as movement control personnel. (See app R, STANAG 2159, for identification of movement personnel and offices.) Some of the functions normally performed by a TMO at various locations are described in SOLOG Agreement 31 (app I). Additional functions of the TMO are outlined below:

(1) Assist in preparing plans for expeditious handling and loading of freight movements.

(2) Advise the next higher movement office of the ability of shippers to originate and receive movements.

(3) Based on information from the daily installation situation report and other reports, inform the next higher TMO or movement control center (MCC) of the progress of shipments.

(4) Act to correct congestion or conditions which reduce the movement capacity of available facilities. When action requires more than the delegated local authority, recommendations are referred to the next higher TMO or headquarters.

(5) Assure that movements are made by the means and in the priority designated by movement programs or other directives.

(6) Receive requests from shippers for transport capacity to meet movement requirements.

(7) Allocate movement capability to shippers to fulfill movement requirements, including nonprogramed requirements for which local release is authorized by proper authority.

(8) Submit to the next higher TMO or MCC requests for transport capacity for movements not contained in movement programs or other directives and for which local release has not been authorized.

(9) Determine through movement channels, the ability of consignees to accept shipments.

(10) Prepare and distribute movement instructions to shippers and transport services to assure that activities are coordinated in the accomplishment of movements.

(11) Coordinate the arrival and spotting of transport equipment for loading and unloading at the time and place mutually agreeable to the shipper and the transport service.

(12) Determine compliance with established packing, marking, and documentation procedures.

(13) Determine compliance with established procedures for marking military cargo for international shipment of cargo. (Special requirements for marking of military cargo for international shipment in NATO areas are contained in STANAG 2023 (app J).)

(14) Provide such advice and supervision as may be required for efficient and expeditious handling, loading, and unloading of transport equipment.

(15) Insure, as far as practicable, that transportation equipment or convoys of equipment are loaded for one destination.

(16) Arrange for and coordinate escorts and communications for shipments of classified material as required.

(17) Arrange for and coordinate en route bivouacs, rations, services, and resupply for movements, as required.

(18) Notify the destination TMO of any information pertinent to the movement which may assist the consignee in receiving the movement.

(19) Enforce embargoes and priorities that have been established by proper authority.

(20) Advise installations of impending arrival of movements listed in movement programs or other directives.

(21) Regulate movements bound to or from the installation or area by granting or refusing clearances to local installations originating or receiving movements.

b. TMO Serving as a Rail Transportation Officer. The TMO may be assigned responsibility for performing the duties of a rail transportation officer (RTO). The RTO facilitates movement of freight and passengers through his area of responsibility and provides a point of contact with all carriers and travelers within the area. A TMO assuming the responsibilities of an RTO may, in addition to his normal functions, perform any or all of the following:

(1) Maintain custody of, account for, and issue transportation requests, warrants, or tickets for travel on commercial or military railways.

(2) Furnish travel information and obtain passenger accommodations for persons traveling on official business in military or commercial rail equipment.

(3) Maintain familiarity with schedules, services, facilities, rates, fares, and charges of commercial rail carriers and provide such information to US-sponsored travelers.

(4) Supervise the operation of a consolidation and distribution facility in conjunction with a less-than-carload service of the rail carriers in the area. When assigned this function, additional personnel and equipment from TOE 55–560 must be authorized.

(5) Arrange for messing and billeting of in-transit personnel.

(6) Obtain schedules for special military trains.

(7) Arrange for provisioning of military passenger trains originating in or transiting the area.

(8) Prepare passenger manifests.

(9) Provide conductors for military trains.

(10) Assist arriving personnel through customs and immigration at rail ports of entry or at commercial water ports of entry where no US terminal unit is stationed.

c. Air Terminal Movement Control Teams. The air terminal movement control teams LE and LF replace the air traffic coordinating office which previously coordinated the use of Army-allocated intertheater and intratheater airlift provided by the Air Force. These two teams provide liaison with the Air Force air terminal commander as required for clearance of Army cargo and personnel from the air terminal; for coordinating arrival at the air terminal of Army-sponsored personnel, resupply cargo, and retrograde material; and for deployment of Army tactical forces. The teams (fig 5–1) consist of transportation movement control personnel, medical service personnel, adjutant general personnel, and general supply movement expediting personnel. These team members make up a control unit that can coordinate the movement of all Army cargo and personnel through Air Force air terminals by carrying out the functions discussed below:

(1) *Movement control.* The movement control personnel—

(*a*) Carry out the movement control functions programed by the movement control agency.

(*b*) May (when authorized) commit the transport capabilities of local or adjacent motor and Army air transport units for local movement to and from the air terminal and adjacent medical, personnel replacement, and supply installations.

(*c*) Coordinate the flow of cargo handled by the supporting terminal transfer company.

(2) *Medical service movements.* The medical service personnel—

(*a*) Coordinate movement of medical supplies (including shipments of whole blood) with appropriate medical supply elements and with the medical inventory control center (ICC).

(*b*) Coordinate with the medical command medical regulating officer (MRO) in the movement of patients.

(3) *Replacement movement.* The organic adjutant general personnel maintain liaison with the local or adjacent replacement regulating detachment of the personnel command to—

(*a*) Coordinate the arrival and clearance of theater replacements at the air terminal.

(*b*) Coordinate the air movement of rotation, medical return-to-duty, rest and recuperation, and leave personnel.

(4) *Supply movement (other than medical supply).* The supply personnel—

(*a*) Coordinate the arrival of air cargo shipments with local or adjacent supply depots or supply points, expediting clearance of cargo from the air terminal.

(*b*) Advise and coordinate with the support command materiel management center concerning air shipments that arrive at the terminal without advance manifests.

(*c*) Inform the materiel management center concerning frustrated cargo (see glossary) at the Army in-transit holding area.

(*d*) In consonance with the command's movement program, coordinate the movement into the air terminal of retrograde or resupply cargo.

d. Highway Regulating Team. Functions of the highway regulating team in operating a highway regulation point include the following:

(1) Report convoys and other vehicles arriving at and clearing the regulating point so that the rate of march can be adjusted if necessary. These reports may be to the traffic headquarters and to highway regulation points further along the route as appropriate (content of passing reports includes identification of the vehicle or movement, the reporting point, and the date and time of passing).

(2) Receive, correlate, and disseminate highway traffic and operational information and make reports concerning current highway conditions and changes as they occur.

(3) Transmit orders from the traffic headquarters or other headquarters to passing units, convoys, or other traffic.

(4) Recommend and, when directed by the highway traffic headquarters, accomplish such actions as diversions, changes in priorities of traffic, and holding of vehicles or convoys.

Section II. DUTIES OF KEY PERSONNEL

5–6. Transportation Movement Office

Duties of personnel assigned to the transportation movement office (TMO) essentially parallel the duties of movement control personnel assigned to higher headquarters. The primary difference is that personnel assigned to the TMO are not involved in the large scale planning and programing carried out at higher echelons. Rather, the TMO is concerned with the day-by-day activities of the transport users and mode operators in carrying out the movement of personnel and cargo within the TMO's area of responsibility. Generally, the TMO is organized into two primary sections—freight and passenger. The senior movement officer directs and controls the section activities and is assisted in carrying out his responsibilities by assigned officer and enlisted movement specialists. The movement officer in charge of a TMO is responsible for the following within his assigned area or at his assigned activity or installation:

a. Acts as field representative of the chief of the movement control center (MCC) to which the TMO is attached.

b. Maintains liaison among the transport services, shippers, and receivers.

c. Keeps informed of and advises the MCC concerning location of units and installations, transportation requirements, availability of transport modes, capabilities of installations to ship and receive, and the general transportation movement situation in the area of responsibility.

d. Recommends selection of sites for supply activities, truckheads, railheads, airheads, and inland waterway terminals.

e. Advises commanders of units and service installations concerning transportation matters.

f. Assists in carrying out the movement program and directives from higher headquarters; exercises on-the-spot movement management in accordance with the movement program.

g. Enforces movement priorities and, when appropriate, challenges priorities.

h. Investigates movement delays, initiates tracing action, and makes recommendations to the MCC concerning embargoes, diversions, and reconsignments.

i. Screens transportation control and movement documents (TCMD) and other movement documentation and marking for correctness and completeness. (When necessary, the TMO will *assist* the shipper in preparation of the TCMD; however, the TMO is *not* responsible for its actual preparation).

j. Places requirements on mode operators for the movement of personnel and freight.

k. Assures that mode operator equipment is available to the shipper at the required location at the proper time.

l. When locally allocated shipping capability permits, issues the shipper a transportation movement release (this is the authority for movement). Otherwise, refers the request for movement to the regional TMO or the MCC.

m. Assures that the shipper forwards a report of shipment (REPSHIP) to the consignee, the MCC, and other interested activities. (The NATO term for the REPSHIP is advice of movement (STANAG 2164, app S).) Upon completion of shipment, the consignee TMO forwards the completion report to the MCC.

n. Receives, processes, and forwards to the highway traffic headquarters, requests for movement over controlled routes; forwards replies from the highway traffic headquarters to the requesting unit.

o. Acts as the coordinator between the shipper and the MCC in arranging for movement of outsize, hazardous, or classified materiel.

p. Insures that each terminal, consignor, and consignee notifies the TMO of each receipt and unloading and each loading and release (dispatch) of containers or controlled vehicles used in intertheater transportation; relays the report of transaction to the special movement division of the theater army support command MCC.

q. Directs compilation of records, reports, and

other information as required and makes prescribed distribution of reports, information, and statistical data concerning the transportation situation, requirements, and performance.

5–7. Air Terminal Movement Control Team

Duties of key personnel in the air terminal movement control team are discussed in paragraph 5–5*c*.

5–8. Highway Regulating Point

The commander of the highway regulating point (HRP) is the field representative of the highway traffic headquarters of the movement control unit to which the HRP is attached. As such, he is responsible for carrying out applicable portions of the overall plan for highway regulation as formulated by the traffic headquarters. He is assisted in this task by enlisted team members, who are specialists in all aspects of highway movement planning and operations. For a general description of duties of the HRP team, refer to paragraph 5–5*d*.

Section III. COMMUNICATIONS

5–9. Communications for Movement Control Teams

a. Transportation Movement Office (TMO). With the exception of TMO C (team LA, TOE 55–580), which has only a single telephone, each TMO is authorized two landline teletypewriter sets which net through the area communications system. Backup communication consists of telephone, which also nets through the area communications system, and of messenger and mail. Additionally, the regional TMO is authorized one truck-mounted radio (AN/VRC–46) which permits voice transmission and entry into the radio-wire integrated (RWI) system.

b. Air Terminal Movement Control Teams.

(1) Teams LE and LF are primarily depen-

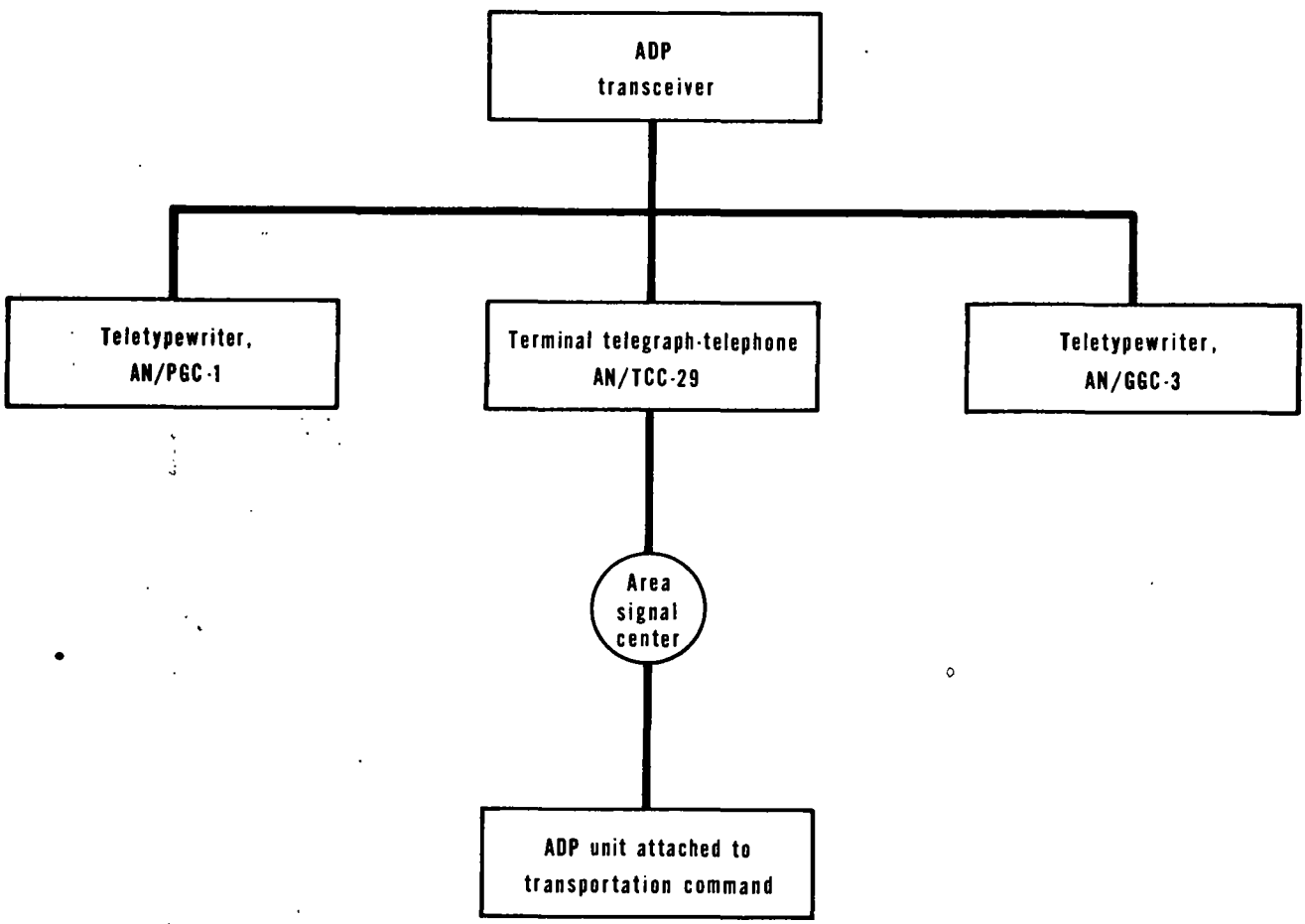


Figure 5–2. ADPE and teletypewriter wire net diagram, air terminal movement control team.

dent upon an ADPE card punch machine and an ADPE data transceiver unit for transmitting and receiving movement control data between the team and the theater army support command movement control agency. Two landline teletypewriter sets provide backup. The ADPE and teletypewriter wire net diagrams are shown at figure 5–2.

(2) The teams are authorized a radio set, AN/VRC–46, for each ¼-ton truck assigned. These radios permit continuous contact with the team's officer personnel who will be traveling to and from supply points, in-transit holding areas, personnel regulating detachments, medical evacuation holding areas, aircraft loading ramps, and transportation terminal transfer units and mode operators. Two radio sets, AN/PRC–25, are provided for team personnel working at aircraft loading ramps, helipads, and the in-transit holding area. A radio set, AN/VRC–47, serves as the team net control station. The radio net for the transportation movement control (air terminal) team LE is shown at figure 5–3 (team LF is identical except for two less radio sets, AN/VRC–46).

(3) Telephone provides additional backup communications service, using direct tie lines with adjacent units, and the area communications system for other units. The telephone wire net for the transportation movement control (air terminal) team LE is shown at figure 5–4 (team LF is identical except for four less telephones).

5–10. Communications for Highway Regulating Points

The highway regulating point (HRP) is authorized one telephone which, through the area communications system, permits the HRP to communicate with adjacent units (TMO's and HRP's) and with the highway traffic headquarters. One truck-mounted radio set AN/VRC–46 provides backup voice communication and entry into the radio-wire integrated system.

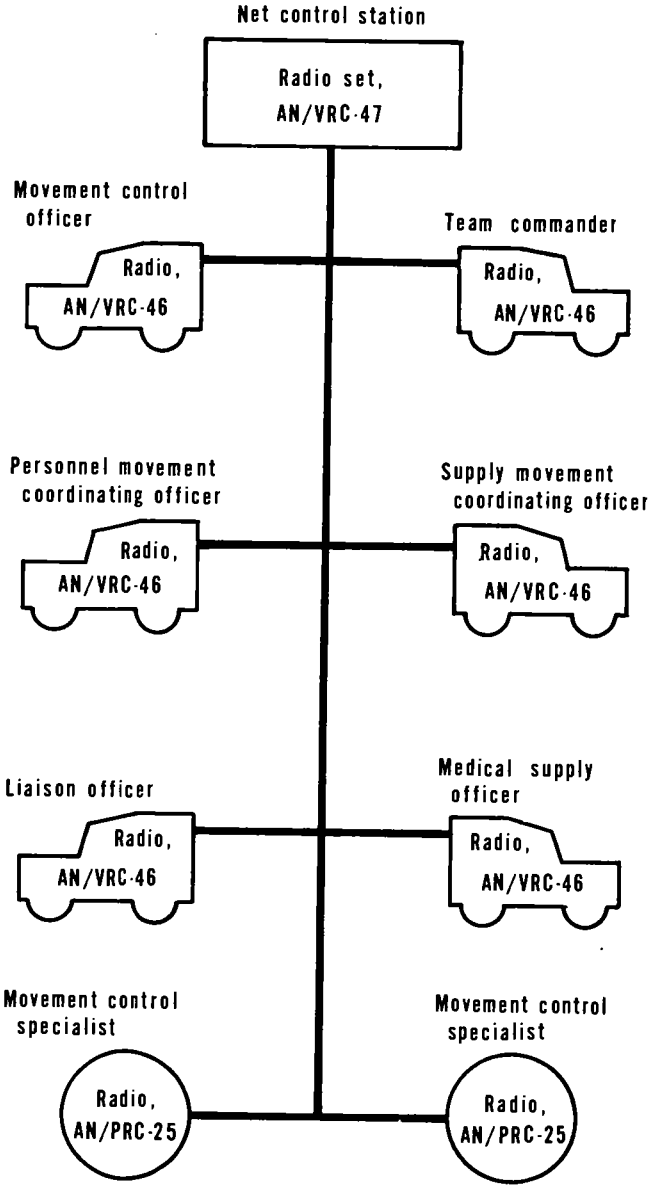


Figure 5–3. Radio net, air terminal movement control team LE.

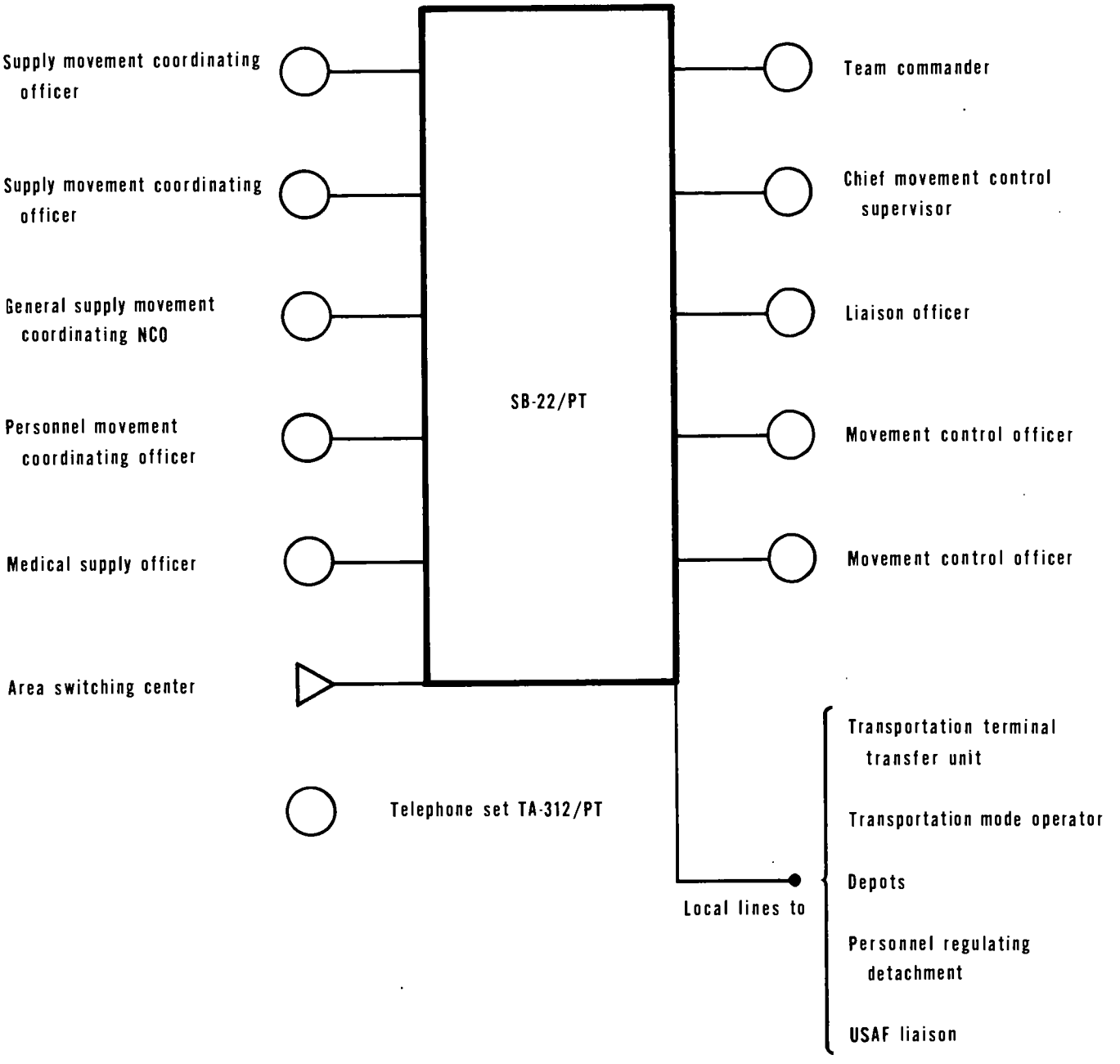


Figure 5–4. Telephone wire net, air terminal movement control team LE.

Section IV. MOBILITY

5–11. Movement Control Teams

a. Transportation Movement Office (TMO). Only TMO C is 100 percent mobile with organic equipment (with ¼-ton truck and trailer). TMO A, with two ¼-ton trucks and trailers is approximately 65 percent mobile; TMO B, with one ¼-ton truck and trailer, is approximately 75 percent mobile; and TMO D (regional TMO) is approximately 50 percent mobile with two ¼-ton trucks and trailers and one ¾-ton truck and trailer.

b. Air Terminal Movement Control Team. With only six ¼-ton trucks authorized in team LE and four in team LF and one ¼-ton trailer in both teams, the air terminal movement control teams LE and LF are approximately 25 percent mobile in organic vehicles.

5–12. Highway Regulating Point

Team GG (TOE 55–540), highway regulating point, is 100 percent mobile in its organic vehicles, consisting of two ¼-ton trucks with trailers.

CHAPTER 6

MOVEMENT DOCUMENTS, REPORTS, RECORDS, AND PUBLICATIONS

(STANAG 2156 AND SOLOG AGREEMENT 27R)

Section I. MOVEMENT DOCUMENTS

6–1. Importance of Documentation

a. During World War II and the Korean conflict, thousands of tons of cargo never did reach their ultimate destinations, becoming frustrated (astray). A similar situation developed in the early stages of the Vietnam conflict where again thousands of tons of cargo piled up on the shore, unable to move because no one knew what was in the boxes and crates, nor who it was intended for. The reason for this was primarily a lack of a completely integrated movement management system—a system achieved only through adequate and reliable communications, coupled with documentation covering the shipment all the way from consignor to consignee.

b. In comparison with these previous conflicts, the logistic system of today has become vastly more complex; technological advances now permit the movement of supplies by type, and in quantities, and at speeds never dreamed of during World War II. Impressive as our increased capabilities may be, however, they really offer no ultimate gain without assurance that the requisitioner or consignee will receive his shipment at the right place at the right time. It is readily apparent that today the problems of movement control—or management—are compounded many times over, and that a lack of adequate and correct documentation will inevitably result in a breakdown of the logistic support system.

c. To satisfy movement control objectives, cargo documentation should address five basic areas—

(1) What is to be moved?
(2) When is it to be moved?
(3) Where is it going?
(4) When is delivery required?
(5) By what mode is it going?

d. Improperly or inadequately documented cargo may—

(1) Become lost or damaged.
(2) Be incapable of, or delayed in, delivery.
(3) Reduce the carrier's capability.
(4) Cause unjustified expenditure of manhours and money.
(5) Cause congestion and confusion along lines of communication.

e. Some major pitfalls in documentation are—

(1) Incompleteness.
(2) Inaccuracy.
(3) Illegibility.
(4) Improper distribution.
(5) Improper handling (for example, loss of copies).

6–2. Basis for Documentation

a. This section presents a broad discussion of the more commonly used transportation movement documents and their purpose, and is intended as guidance and for instructional purposes only. It does not substitute for DOD Regulation 4500.32–R, Military Standard Transportation and Movement Procedures (MILSTAMP), which is the sole reference for established documentation procedures and formats. However, inaddition to MILSTAMP, the theater army support commander may publish supplementary transport and travel regulations and prescribe additional documents as may be appropriate to the specific theater or theater army movement system (for example, in an oversea theater the use of host nation transportation resources normally requires the use of multilingual documents designed, in coordination with representatives of the host nations, specifically to meet that theater's needs).

b. DOD Regulation 4500.32–R is the basic publication for documentation of cargo moving in the defense transportation system. Implemented by all military services and DOD agencies, it provides a standard system of

documentation procedures, formats, and codes to carry out routing and movement control of shipments (with certain exceptions as discussed in paragraph 6–3 below) moving through any part of the defense transportation system. However, since the control of shipments moving through the defense transportation system must satisfy the needs of those activities using this system (that is, the requisitioner and the supporting supply activities), there must also be a means for interrelating supply and transportation. This is accomplished primarily by interface of MILSTAMP with two additional DOD publications:

c. Army Regulation 725–50, Requisitioning, Receipt, and Issue System which implements UMMIPS and Military Standard Requisitioning Procedures (MILSTRIP) policies and, for each supply demand, provides a uniform means to convey supply information through the various *supply* distribution systems. MILSTAMP interfaces with MILSTRIP to integrate the supply and transportation actions, thereby permitting MILSTAMP to convey operational and management information through *transportation* channels.

6–3. Exceptions to MILSTAMP Documentation Procedures

As noted in paragraph 6–2*b* above, not all types of shipments are subject to the documentation procedures prescribed by MILSTAMP. Exceptions to MILSTAMP procedures include—

a. Bulk petroleum, oils, and lubricants (POL) shipped in such a manner that decanting is required at destination (shipped by tanker or pipeline).

b. Shipments to or between Government contractors' plants, moving exclusively on a Government bill of lading.

c. Unit movements, except surface shipments and follow-on residual air shipments moving in the Defense Transportation System.

d. Passengers.

e. US mail, except bulk mail moving by water or air (for example, small individual mail shipments of items such as repair parts are not subject to MILSTAMP).

f. Shipments moving within a post, camp, or station.

g. Military assistance program shipments if receipted for directly by the recipient country.

h. Transportation of nuclear weapons.

6–4. Transportation Control and Movement Document—Basic DOD Form for Movement Control

The basic document used to control unit and cargo shipments under MILSTAMP is the transportation control and movement document (TCMD), DD Form 1384. In the oversea theater, the TCMD is prepared by the shipping activity for each shipment offered for movement in the transportation movement system. Although the transportation movement officer or movement control specialist does not actually prepare the TCMD, he must be completely conversant with its preparation and use so that he can assist and advise the shipper in document preparation and can check the completed document for accuracy and completeness.

a. MILSTAMP prescribes two formats of the TCMD for use in the oversea theater: a manual version and a standard 80-column punchcard or automated version. Although use of the automated version is becoming increasingly prevalent, an automated system that will provide Armywide compatibility is dependent upon the completion of current studies, and development and fielding of the necessary hardware and software. Since completion of these actions is not anticipated for some time to come, discussion in this manual is primarily concerned with the manual version of the TCMD. (The manual version of the TCMD is illustrated in annex I to appendix B.)

b. A TCMD is required each time cargo is moved from the area of responsibility of one individual or activity to another. To properly serve users of the transportation service and to satisfy the principles of movements, the TCMD must move in advance of the cargo to provide advance notification of shipment from the shipper—through all en route activities that will be affected by the shipment—to the ultimate consignee. This advance notification is the key to effective operations since, without prior knowledge of the shipment and the ability to locate the shipment anywhere within the movement system, affected agencies (transportation facilities, mode operators, consignees) cannot plan for and react promptly to requirements placed upon them and the system quickly deteriorates into a state of congestion, confusion, and general ineffectiveness. Normally, the TCMD should be received by the consignee 24 to 48 hours before receipt of the shipment. See FM 55–10 and SOLOG 27R (app H of this manual) for a discussion of the principles of movements.

c. The TCMD serves a number of other purposes in addition to that of advance notification of shipment.

(1) MILSTAMP provides for a standardized tracer system, called a "head-on tracer," to locate or trace overdue or lost shipments. Using the transportation control number entered on the TCMD as a reference for the shipment in question, tracers are sent in the opposite direction of the movement of the specific freight shipment—that is, from consignee back toward the consignor. At a point where the tracer and shipment actually meet (transshipment point), the transshipping activity provides revised information regarding the estimated time of arrival of the shipment at destination and the reasons for delay. It should be noted that, before the MILSTAMP tracer is submitted, the required delivery date must have expired and verification must have been made that the shipment has actually been made and is in transportation channels. See appendix C for a detailed discussion of the transportation control number.

(2) The TCMD also provides a basis for intransit data collection and performance reporting. Such data permit the maintenance of historical information which is used for future planning and for evaluation of overall transportation performance.

(3) Additionally, the manual form of the TCMD may—

(*a*) Serve as an air waybill or a highway waybill; that is, it is the authority for the carrier to have the shipment on board. When the waybills are consolidated, they become what is essentially a cargo manifest.

(*b*) Serve as a cargo delivery receipt.

Note. When the TCMD is used as a cargo delivery receipt, a system should be established whereby a receipted copy of the TCMD is expeditiously returned by the consignee directly to the consignor. The consignor may then compare that copy of the TCMD with his file copy to make sure that all items that were shipped have actually been delivered to the consignee. This procedure helps guard against pilferage, en route alteration of the TCMD, and other irregularities that may occur en route.

(*c*) Serve as a source document for preparation of the ocean or air cargo manifest (DD Form 1385).

(*d*) Be used as an ocean or air cargo manifest.

(*e*) Serve as a basis for determining requirements for movement capability.

(*f*) Be used as a request for transportation when only US forces are involved. Requests for movements involving host or allied nations are governed by the provisions of STANAG 2156 (app P).

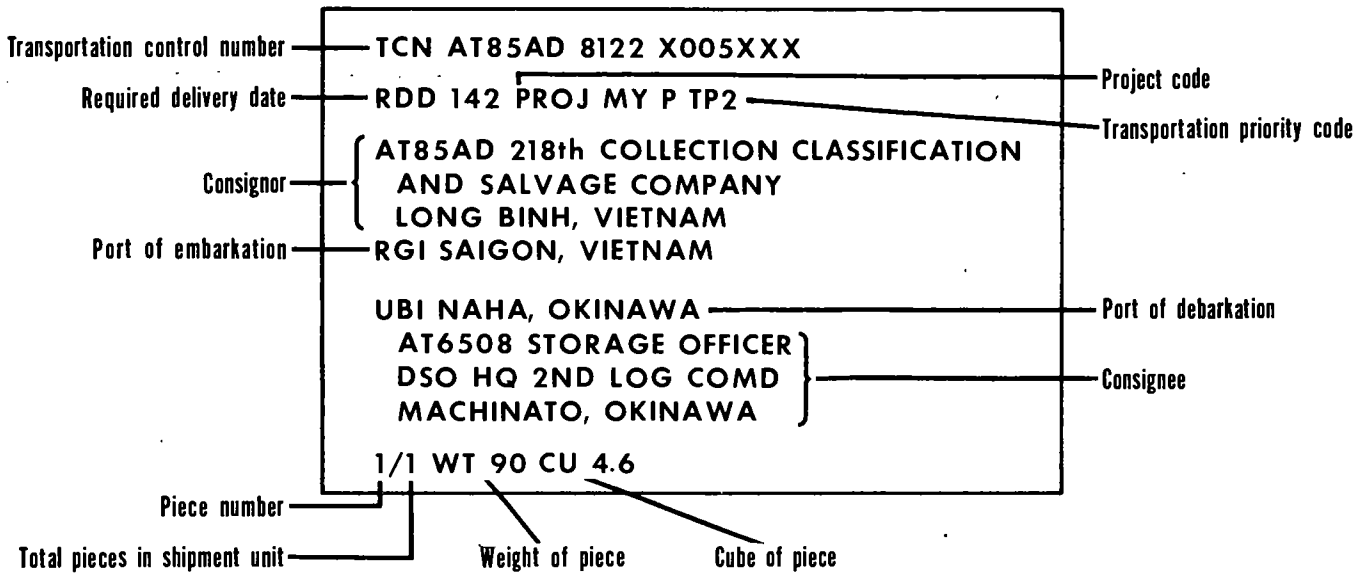
d. Although the TCMD is not normally an accountable document, an exception may be made (as is done in a current theater) where commercial carriers are carrying cargo for US forces under contract and are paid according to tonnage hauled. Under these circumstances, the TCMD's are prenumbered and issued for each shipment, with the TCMD serving the same purpose as a Government bill of lading except that the statement of general conditions and instructions shown on the reverse of the Government bill of lading are not contained in the TCMD but are stipulated in the carrier's contract. The TCMD used in this manner becomes an accountable document.

6–5. Shipment Marking

a. The following discussion describes and illustrates the basic requirements for shipment address marking. A detailed treatment of the subject is contained in MIL–STD–129. Shipment marking is a responsibility of the shipping activity; however, the movement representative must be familiar with marking procedures so that he will know that the shipment is properly addressed when it is received for movement. A shipment, otherwise correctly documented, may be frustrated (incapable of delivery) or lost because the shipment address marking is lacking or has been improperly prepared. Comparable data elements in the TCMD and the shipment markings must be identical. In the case of shipments involving host or allied nation movement systems, multilingual address markings may be required. Cargo for international movement by all modes is marked as prescribed by STANAG 2023 (app J).

(1) *Stenciling* is used for all surface shipments where it is impractical to use the military shipment label (DD Form 1387) or the military shipping tag (DD Form 1387–1) (Ref MIL–STD–129–E). A stencil address marking (fig 6–1) includes the following data:

TCN—line 1
RDD—line 2
Project code—line 2
Transportation priority—line 2
Consignor—line 3
POE—line 4
POD—line 5
Consignee—line 6
Piece number—line 7
Total pieces in shipment unit—line 7
Weight of piece—line 7
Cube of piece—line 7



NOTE: Refer to MIL-STD-129-E and chapter 11, MILSTAMP to assure currency.

Figure 6–1. Example of stenciled address marking.

TRANSPORTATION CONTROL NUMBER	RDD	PROJECT
FB5644 5122 5678 XXX	126	555

FROM:

FD2030 TINKER AFB, OKLA

TRANS PRIORITY: 1

TO: *(POE when applicable)*

DOVER TRANSPORTATION OFFICER

DOVER AFB, DEL

POD *(When applicable)*

MHZ MILDENHALL STATION
SUFFOLK, ENGLAND

ULTIMATE CONSIGNEE OR MARK FOR

FB5644 RAF BENTWATERS
SUFFOLK, ENGLAND

PIECE NUMBER	TOTAL PIECES	WEIGHT THIS PIECE	CUBE THIS PIECE
1	1	70	10

DD FORM 1387, 1 APR 66 EDITION OF 1 APR 63 WILL BE USED. MILITARY SHIPMENT LABEL

NOTE: Refer to MIL-STD-129-E and chapter 11, MILSTAMP to assure currency. For an explanation of codes, refer to appendix B of this manual.

Figure 6–2. Military shipment label (DD Form 1387) for intertheater shipment.

Enter freight warrant number here

TRANSPORTATION CONTROL NUMBER	RDD	PROJECT
AK4581 6221 0004 A XX TCU 054068	272	NONE

FROM: Absender / Expediteur / Mittente	TRANS PRIORITY
US Army General Depot Kaiserslautern, Germany AK 4T43	3

POE

POD

TO: Empfaenger / Destinataire / Destinatario
627th Repair Parts Co, GS
Depot 582, Mannheim, Germany
AK4581
Mannheim-Kaefertal, Germany

PIECE NO. Stück No. / Piece No. / Pezzo No.	TOTAL PIECES van de di / Stück(en) pieces pezzi	WEIGHT Gewicht / Poids / Peso	CUBE m³ Cube Cubo
1	10	500	20

Enter destination railhead here

Figure 6-3. Military shipment label modified by local SOP for use with intratheater shipment.

MILITARY SHIPPING TAG

DD FORM 1387-1 1 APR 83

TRANSPORTATION CONTROL NUMBER	RDD	PROJECT	TRANS PRIORITY
FB5644 5122 5678 XXX	126	555	1

FROM:
FD 2030 TINKER AFB, OKLA

POE
DOVER TRANSPORTATION OFFICER
DOVER AFB, DEL

POD
MHZ MILDENHALL STATION
SUFFOLK, ENGLAND

TO:
FB5644 RAF BENTWATERS
SUFFOLK, ENGLAND

PIECE NUMBER	TOTAL PIECES	WEIGHT	CUBE
1	1	70	10

NOTE: Refer to MIL-STD-129-E and chapter 11, MILSTAMP, for currency.

Figure 6-4. Example of a military shipping tag (DD Form 1387-1) for an oversea shipment.

(2) The *military shipment label* (DD Form 1387), illustrated in figures 6-2 and 6-3, is used when the marking area does not permit stenciling. It is also used for air shipments. A red border label is used for priority 1 shipments, and a blue border label for priority 2; priority 3 shipment label has no color identification.

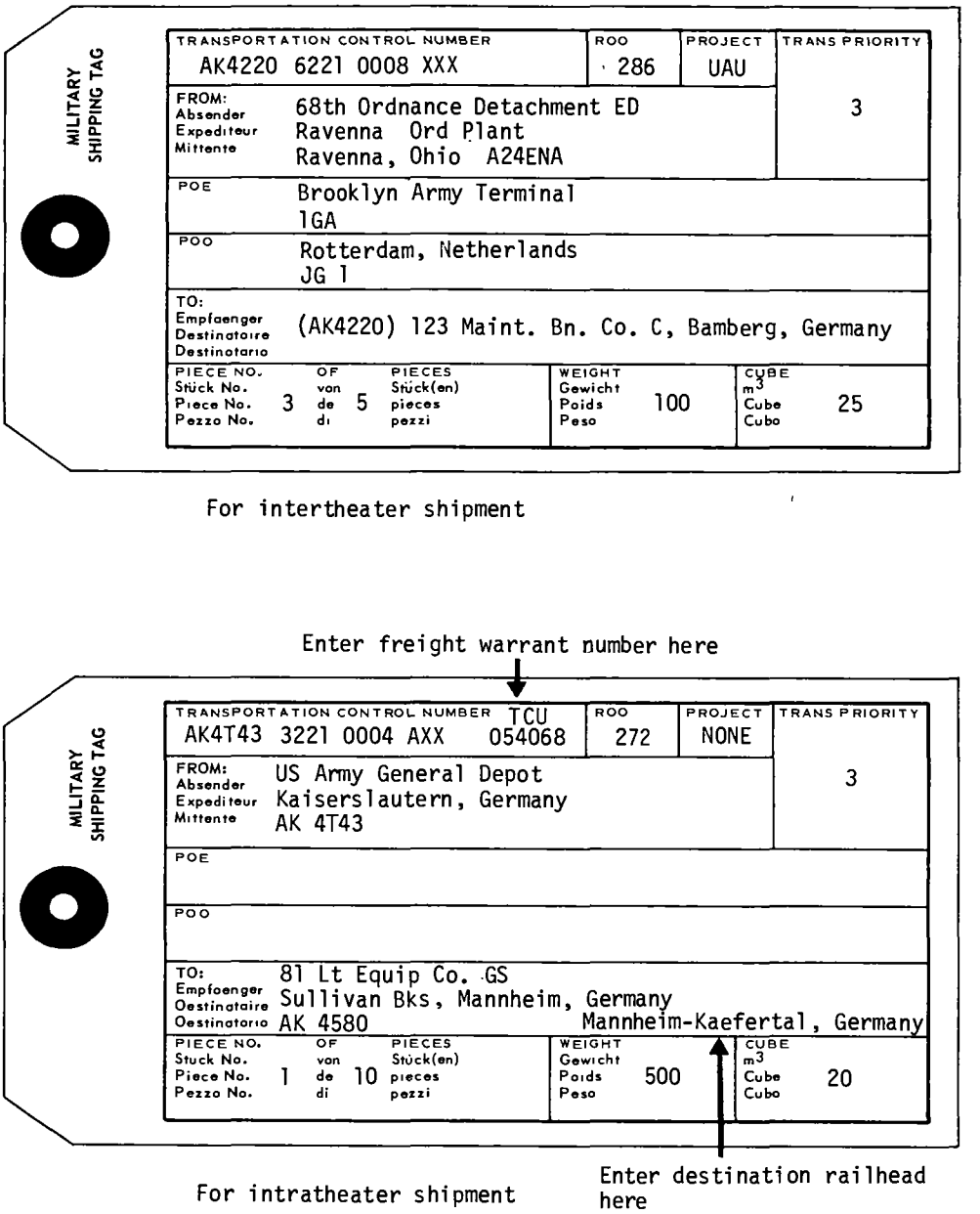


Figure 6–5. Examples of military shipping tags (DD Forms 1387–1) modified by the theater commander to meet requirements of the specific theater.

Note. For export air shipments, the origin Military Airlift Command (MAC) aerial port of embarkation is indicated in the *POE block* and the final MAC aerial port of debarkation in the *POD block.*

(3) The *military shipping tag* (DD Form 1387–1), illustrated in figures 6–4 and 6–5, is used primarily for shipments too small to accommodate the shipment label. Additionally, it may be used for air shipments in the same manner as the military shipment label. The same border colors are used for priority identification as with the shipment label.

b. Each shipment unit container is marked by stencil, label, or tag as appropriate. When shipment unit containers are consolidated by the origin shipper (palletized unit load, roll-on/roll-off trailer, or other consolidation container) for delivery as a unit to the ultimate consignee, a complete address marking is required for the external consolidation container only. Shipment unit containers that have been consolidated are marked only with the shipment unit TCN, piece number, total pieces, and consignee.

6–6. Special Handling Data Certification (DD Form 1387–2)

a. When dangerous, hazardous, and classified

①Sample copy for flammable solvent

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
AX3166 0362 0021 XXX			
DESTINATION			
Fort Shafter Hawaii	Polish, metal, liquid		124

HANDLING INSTRUCTIONS

Contains flammable solvents.

Store in a cool, well-ventilated area away from fire hazards and oxidizing materials. KEEP CONTAINER TIGHTLY CLOSED.

ICC class flammable liquids--red label

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with.

☒ SUBPARAGRAPH 6-13, AFM 71-4, TM 38-250, NAVWEPS 15-03-600 AND MCO P4030 19

☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82

☐ OTHER *(Specify)*

☒ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE
/S/ Joe Doaks, CPT, USA Atlanta Army Depot	10Jan1971

DD FORM 1387-2, 1 APR 66 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: Refer to MIL-STD-129-E and chapter 3, MILSTAMP for currency.

Figure 6–6. Special handling data/certification for different types of cargo (DD Form 1387–2).

shipments or other shipments that require special handling are moved by air, the shipper applies the special handling data/certification (DD Form 1387–2) to each piece of cargo to be shipped. The form is used to identify characteristics, precautionary measures, and special instructions for safe and proper handling of dangerous, hazardous, and classified shipments or other shipments that require special handling. Figures 6–6① through 6–6⑦ illustrate the principal ways in which this form may be used.

b. The shipper enters the following information on the form:

TCN

Destination—in-the-clear geographic location of the ultimate consignee.

Nomenclature of item—specific nomenclature as shown in AFM 71–4/TM 38–250 (do not indicate nomenclature of classified shipments).

Net explosive weight—show net explosive weight for class A and B explosives only.[1]

Gross weight—show total weight of piece.

Handling instructions—show shipment characteristics, required precautionary measures, loading or stowing instructions, and all other details necessary for safe and proper handling prescribed by regulations, or as determined by the shipping activity.

Shipper certification—enter the packaging subparagraph number in accordance with the provisions of AFM 71–4/TM 38–250. Additionally, if the shipment is eligible for movement by passenger aircraft, the shipper's representative checks the block "Shipment Within Passenger/Cargo Aircraft Limitations." The individual making the certification signs the form.

c. Classified shipments are not identified as such by marking on the outer container of the shipment. Instead, the notation "Signature Service Required" is entered in the "Handling Instructions" block of DD Form 1387–2. Shipments that are both classified and dangerous also require the notation "Signature Service Required," and will show the special handling instructions and the shipper's certification.

d. Each container of the shipment unit must have one copy of DD Form 1387–2 affixed to it next to the shipment label or tag. Three additional copies of DD Form 1387–2 are forwarded to the terminal with the shipment.

6–7. Materiel Inspection Tag

AR 700–93 and AR 746–1 require that retrograde materiel, supplies, and equipment likely to have been loaded in an explosive or contaminated condition (for example, parts from bombs, boobytraps, mines, and other munitions) be in-

[1] Class A explosive—detonating hazard; class B explosive—flammable hazard.

②Sample copy for radioactive material, class D poison

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
NO PASSENGERS (if applicable)	Radioactive material, Class D poison Single dagger item (if applicable)		
DESTINATION			

HANDLING INSTRUCTIONS

Radioactive level is_____. Do not load within___feet of areas continually occupied by humans or animals. Do not load closer than___feet to undeveloped film. If contents or container become damaged, contact nearest medical facility.

Do not load with Class "A" explosives.

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:

☒ SUBPARAGRAPH_____, AFM 71-4, TM 38-250, NAVWEPS 16-03-500 AND MCO P4030.19

☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82

☐ OTHER *(Specify)*

☐ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE

DD FORM 1387-2, 1 APR 66 — REPLACES EDITION OF 1 APR 53, WHICH MAY BE USED.

③Sample copy for magnetic equipment

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
DESTINATION	Magnetic equipment restrictive label cargo		

HANDLING INSTRUCTIONS

Do not store or load closer than 7 feet to compass or sensing devices unduly affected by magnetic fields.

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:

☒ SUBPARAGRAPH_____, AFM 71-4, TM 38-250, NAVWEPS 16-03-500 AND MCO P4030.19

☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82

☐ OTHER *(Specify)*

☐ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE

DD FORM 1387-2, 1 APR 66 — REPLACES EDITION OF 1 APR 53, WHICH MAY BE USED.

Figure 6-6—Continued.

spected by the shipper before shipment and that the shipper affix to each vehicle, weapon (other than small arms), or other piece of major equipment, a tag showing certification by a commissioned officer that the cargo is explosive- and contamination-free. Additionally, the shipper indicates in the remarks block of the TCMD that the cargo has been certified free of explosives. The materiel inspection tag is illustrated in figure 6-7.

④Sample copy for poisonous gases or liquids

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER / DESTINATION	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
NO PASSENGERS (if applicable)	Poisonous gases or liquids Poison gas label cargo Single dagger item (if applicable)		

HANDLING INSTRUCTIONS

Poisonous, irritant gas (liquid). Handle with care. Load for easy access. Smoking with consent of aircraft commander. (If flammable, make remarks above as to what materials to fight fires with.) Do not load with class A or B explosives, common fireworks, red, yellow, white label cargo.

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:

☒ SUBPARAGRAPH_____, AFM 71-4, TM 38-250, NAVWEPS 15-03-600 AND MCO P4030.19

☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82

☐ OTHER *(Specify)*

☐ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE

DD FORM 1387-2, 1 APR 66 — REPLACES EDITION OF 1 APR 65, WHICH MAY BE USED.

⑤Sample copy for acids or corrosive liquids

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER / DESTINATION	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
NO PASSENGERS (if applicable)	Acids or corrosive liquids White label cargo Single dagger item (if applicable)		

HANDLING INSTRUCTIONS

Corrosive liquid and/or fire hazard (as applicable). Store in cool, well-ventilated area away from sunlight, fire hazards, and oxidizing agents. Smoking with consent of aircraft commander. Do not load with class A or B explosives, yellow or poison gas label cargo.

To fight fires of this material, CO2, CCL, or dry chemical may be used.

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:

☒ SUBPARAGRAPH_____, AFM 71-4, TM 38-250, NAVWEPS 15-03-600 AND MCO P4030.19

☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82

☐ OTHER *(Specify)*

☐ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE

DD FORM 1387-2, 1 APR 66 — REPLACES EDITION OF 1 APR 65, WHICH MAY BE USED.

Figure 6–6—Continued.

6–8. Military Freight and Passenger Warrants

When DOD-sponsored cargo or passengers are moved by commercial carrier in the continental United States (CONUS), the Government bill of lading (SF 1103) is the document used to procure the necessary transportation services. In an oversea theater, however, the Government bill of lading is not normally used; instead, when host nation commercial carriers are used, theater policy may prescribe a type of document referred to as a military warrant. This document

⑥ Sample copy for explosive projectiles, ammunition for cannon, class A explosives, etc.

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER / DESTINATION	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
NO PASSENGERS (if applicable)	Explosive projectiles ammunition for cannon boosters, bursters, incendiaries, class A explosives, etc. Single dagger item (if applicable).		

HANDLING INSTRUCTIONS

Explosive hazard. Handle with care. Load for easy access. Smoking with consent of aircraft commander. Do not load with initiating or priming explosives, blasting caps, detonating fuses, fireworks, special or common, red, yellow, white, green, or poison gas label.

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:

- ☒ SUBPARAGRAPH_____, AFM 71-4, TM 38-250, NAVWEPS 15-03-600 AND MCO P4030.19
- ☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82
- ☐ OTHER *(Specify)*
- ☐ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE

DD FORM 1387-2, 1 APR 66 — REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

⑦ Sample copy for small arms ammunition, class C explosives.

SPECIAL HANDLING DATA/CERTIFICATION

TRANSPORTATION CONTROL NUMBER / DESTINATION	NOMENCLATURE OF ITEM	NET EXPLOSIVE WEIGHT	GROSS WEIGHT
NO PASSENGERS (if applicable)	Small arms ammunition Class C explosives Single dagger item (if applicable)		

HANDLING INSTRUCTIONS

Moderate explosive hazard. Handle with care. Load for easy access. Smoking with consent of aircraft commander. Do not store or load with initiating or priming explosives.

SHIPPER CERTIFICATION: This is to CERTIFY that the contents of the packages in this shipment are properly described by name and are packed, marked, and in proper condition for transportation in accordance with:

- ☒ SUBPARAGRAPH_____, AFM 71-4, TM 38-250, NAVWEPS 15-03-600 AND MCO P4030.19
- ☐ OFFICIAL AIR TRANSPORT RESTRICTED ARTICLES TARIFF 6, CAB NO. 82
- ☐ OTHER *(Specify)*
- ☐ SHIPMENT WITHIN PASSENGER/CARGO AIRCRAFT LIMITATIONS

SIGNATURE	DATE

DD FORM 1387-2, 1 APR 66 — REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

Figure 6-6—Continued.

serves in the theater in essentially the same manner as does the Government bill of lading in CONUS and provides, among other things, a basis for audit and for carrier reimbursement. Military warrants are normally multilingual and may vary in format and in type of data to meet the requirements of specific modes of transportation. For example, there may be a military warrant designed for highway movement, another for movement by barge, and still another for use with rail movements. The railway warrant may be designed for a mixed rail

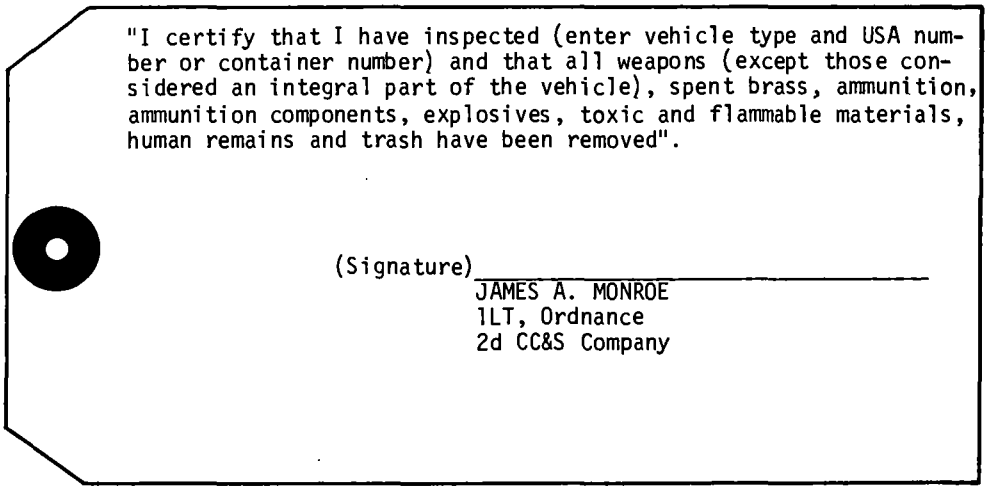
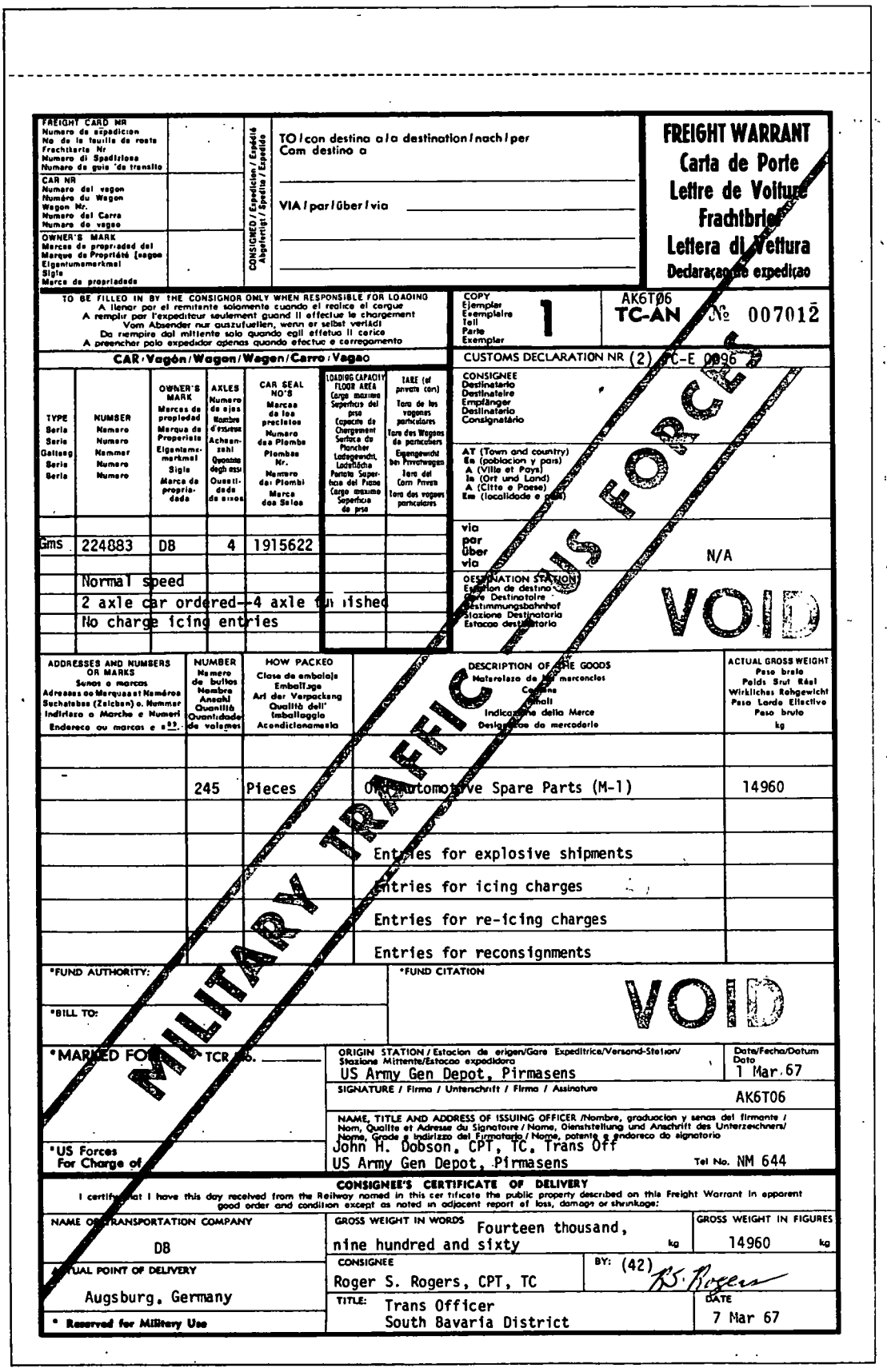


Figure 6-7. Materiel inspection tag.

movement of freight and passengers, or one type of railway warrant may be used for freight and another type for passengers. Since military warrants are used as a basis for payment of the carrier for services rendered, they are serially numbered accountable documents and are controlled, issued, and accounted for by individuals designated to do so by written orders. Because the military warrant varies according to theater policy, no attempt is made here to describe the procedures for its completion; however, so that the reader may have a better understanding of the military warrant, a sample military freight warrant is shown in figures 6-8① and 6-8②.

6-9. Car Labels

Car labels insure the proper handling of shipments of such materials as explosives, flammables, perishables, toxic materials, and fragile items. Also, a standard railcar label is affixed to the car for identification purposes and as an aid in making security checks. Car labels are normally multilingual, and are affixed to each side of the car. Examples of car labels are shown in figures 6-9 and 6-10.



FREIGHT CARD NR
Numero de espedicion
No de la feuille de route
Frachtkarte Nr
Numero di Spedizione
Numero de guia de transito

CAR NR
Numero del vagon
Numéro du Wagon
Wagon Nr.
Numero del Carro
Numero do vagao

OWNER'S MARK
Marcas de propriedad del
Marque de Propriété (wagon
Eigentumsmarkmal
Sigla
Marca de propriedade

CONSIGNED / Expedicion / Expédié
Abgefertigt / Spedita / Expedido

TO / con destino a / a destination / nach / per
Com destino a

VIA / par / über / via

FREIGHT WARRANT
Carta de Porte
Lettre de Voiture
Frachtbrief
Lettera di Vettura
Declaração de expedição

TO BE FILLED IN BY THE CONSIGNOR ONLY WHEN RESPONSIBLE FOR LOADING
A llenar por el remitente solamente cuando el realice el cargue
A remplir par l'expediteur seulement quand il effectue le chargement
Vom Absender nur auszufuellen, wenn er selbst verladt
Da riempire dal mittente solo quando egli effetua il carico
A preencher pelo expedidor apenas quando efectue o carregamento

COPY
Ejemplar
Exemplaire
Teil
Parte
Exemplar
1

AK6T06
TC-AN № 007012

CAR / Vagón / Wagon / Wagen / Carro / Vagao

CUSTOMS DECLARATION NR (2) TC-E 0096

TYPE Serie Serie Gattung Serie Serie	NUMBER Numero Numero Nummer Numero Numero	OWNER'S MARK Marcas de propiedad Marque de Propriété Eigentumsmarkmal Sigla Marca de propriedade	AXLES Numero de ejes Nombre d'essieux Achsenzahl Quantità degli assi Quantidade de eixos	CAR SEAL NO'S Marcas de los precintos Numero dos Plombs Plombes Nr. Numero dei Piombi Marca dos Selos	LOADING CAPACITY FLOOR AREA Carga maxima Superficie del piso Espacio de Chargement Surface du Plancher Ladegewicht, Ladefläche Portata Superficie del Piano Carga maxima Superficie de piso	TARE (of private car) Tara de los vagones particulares Tara des Wagons de particuliers Eigengewicht bei Privatwagen Tara del Carro Privato Tara dos vagoes particulares
Gms	224883	DB	4	1915622		

Normal speed
2 axle car ordered--4 axle furnished
No charge icing entries

CONSIGNEE
Destinatario
Destinataire
Empfänger
Destinatario
Consignatário

AT (Town and country)
En (poblacion y pais)
A (Ville et Pays)
In (Ort und Land)
A (Citta e Paese)
Em (localidade e país)

via
par
über
via
N/A

DESTINATION STATION
Estacion de destino
Gare Destinataire
Bestimmungsbahnhof
Stazione Destinataria
Estacao destinataria

VOID

ADDRESSES AND NUMBERS OR MARKS Sunos o marcas Adresses ou Marques et Numéros Buchstaben (Zeichen) u. Nummer Indirizzo e Marche e Numeri Endereco ou marcas e números	NUMBER Numero de bultos Nombre Anzahl Quantità Quantidade de volumes	HOW PACKED Clase de embalaje Emballage Art der Verpackung Qualità dell' imballaggio Acondicionamento	DESCRIPTION OF THE GOODS Materiales de las mercancias Caisse Kolli Indicazione della Merce Designacao do mercadoria	ACTUAL GROSS WEIGHT Peso bruto Poids Brut Rásl Wirkliches Rohgewicht Peso Lordo Effective Peso bruto kg
	245	Pieces	Of Automotive Spare Parts (M-1)	14960
			Entries for explosive shipments	
			Entries for icing charges	
			Entries for re-icing charges	
			Entries for reconsignments	

*FUND AUTHORITY:

*BILL TO:

*FUND CITATION

VOID

*MARKED FOR

*TCR No.

*US Forces
For Charge of

ORIGIN STATION / Estacion de origen/Gare Expeditrice/Versand-Station/ Stazione Mittente/Estacao expedidora
US Army Gen Depot, Pirmasens

Date/Fecha/Datum Dato
1 Mar 67

SIGNATURE / Firma / Unterschrift / Firma / Assinatura
AK6T06

NAME, TITLE AND ADDRESS OF ISSUING OFFICER /Nombre, graduacion y senas del firmante / Nom, Qualite et Adresse du Signataire / Name, Dienststellung und Anschrift des Unterzeichners/ Nome, Grade e Indirizzo del Firmatario / Nome, patente e endereco do signatario
John H. Dobson, CPT, TC, Trans Off
US Army Gen Depot, Pirmasens
Tel No. NM 644

CONSIGNEE'S CERTIFICATE OF DELIVERY
I certify that I have this day received from the Railway named in this certificate the public property described on this Freight Warrant in apparent good order and condition except as noted in adjacent report of loss, damage or shrinkage:

NAME OF TRANSPORTATION COMPANY
DB

ACTUAL POINT OF DELIVERY
Augsburg, Germany

* Reserved for Military Use

GROSS WEIGHT IN WORDS
Fourteen thousand, nine hundred and sixty kg

GROSS WEIGHT IN FIGURES
14960 kg

CONSIGNEE
Roger S. Rogers, CPT, TC

BY: (42) R.S. Rogers

TITLE: Trans Officer
South Bavaria District

DATE
7 Mar 67

MILITARY TRAFFIC - US FORCES

Figure 6-8 ①. Suggested format for a military freight warrant—front.

Stamps of Transit Stations/Sellos de las estaciones de transito/Timbres des Gares de Transit/Stempel der Umlade- oder Zugwechselbahnhofe/Timbri delle Stazioni di Transito/Carimbo das estacoes de transito			
1	2	3	4

Details of Railway Charges/Detalle de la Tasa/Detail de la Taxe/Frachtberechnung/Dettaglio delle Spese/Detalho da taxa

CHARGEABLE WEIGHT Peso de tasacion Poids arrondi Frachtpflichtiges Gewicht Peso Tassato Peso a taxar	.....kg	NO. OF AXLES Numero de ejes Nombre d'essieux Zahl der Achsen Quantita degli Assi Quantidade de eixos	.....

COUNTRY Pais Pays Land Paese Pais	TARIFF DISTANCE Distancia de tasacion Distance tarifaire Tarifentfernung Distanza di Tariffa Distancia de aplicacao	RATE Unidad de tasacion Unite de Taxe Pauschsatz Unita di Tassa Preco base	TARIFF Clase de tarifa Classe du Tarif Tarifklasse Classe di Tariffa Classe da tarifa
Deutschland	km		
France	km		
Italia	km		
Nederlands	km		
Belgique	km		
Switzerland	km		
Espana	km		
OTHER COUNTRIES / Otros paises / Autres Pays / Andere Lander / Altri Paesi / Outros paises			
	km		
	km		

Freight Charges / Porte / Port / Fracht / Tasse / Porte

(1) PREPAID-DUE/pagado-debido/paye-du/frei-unfrei/assegnato-affrancato/pago-a pagar

Germany Deutschland	France	Italy Italia	Netherlands Nederlands	Belgium Belgique	Switzerland	Spain Espana	OTHER COUNTRIES/Otros paises/Autres Pays/Andere Lander/Altri Paesi/Outros paises	
DM	Fr. F	Lire	D Fl	B Fr	S Fr.	Pts	———	———

VOID

(1) CROSS OUT PORTIONS NOT APPLICABLE/Tachar la mencion inutil/Biffer la mention inutile/Nichtzutreffendes streichen/Cancellare l'indicazione inutile Riscar a indicacao desnessaria

REPORT OF LOSS, DAMAGE OR SHRINKAGE

Unilateral report of the findings of the consignee at delivery made to Military Authorities. This report does not recognize any acceptance of responsibility by the carrier. Notice is hereby given to the carrier to whom this consignment note is surrendered that the shipment was received in the condition shown below. Explanation regarding loss, damage or shrinkage to be made by Consignee, who will state all the facts available concerning the nature or extent of the loss, damage or shrinkage and how it occured. The within ship was received with the following loss, damage or shrinkage.

DESCRIPTION No exceptions	WEIGHT OF SUCH ARTICLES
INVOICE VALUE OR COST OF REPAIRS	I CERTIFY THAT THE FACTS NOTED ABOVE ARE CORRECT: (Consignee)
BY Roger S. Rogers, CPT, TC R.S. Rogers	TITLE Trans Officer, South Bavaria District

STAMP OF DISPATCHING STATION Sello de la estacion de origen Timbre de la gare Expeditrice Stempel des Versandbahnhofs Timbro della Stazione Mittente Carimbo da estacao expedidora	STAMP OF WEIGHING AUTHORITY Sello de la facatria expedidora Timbre du Pesage Wiegestempel Timbro di Pesatura Carimbo da entidade responsavel pela pesagem	STAMP OF RE-ICING STATION Sello de la estacion que procede a la reposicion del hielo Timbre de la Gare de Reglacage Stempel der Nachbeeisungsstelle Timbro della Stazione di Riaghiacciamento Carimbo da estacao que coloca o gelo	STAMP OF STATION OF DESTINATION Sello de la estacion de destino Timbre de la Gare Destinataire Stempel des Bestimmungsbahnhofs Timbro della Stazione Destinataria Carimbo da estacao destinataria

VOID

Figure 6–8 ②. Suggested format for a military freight warrant—back.

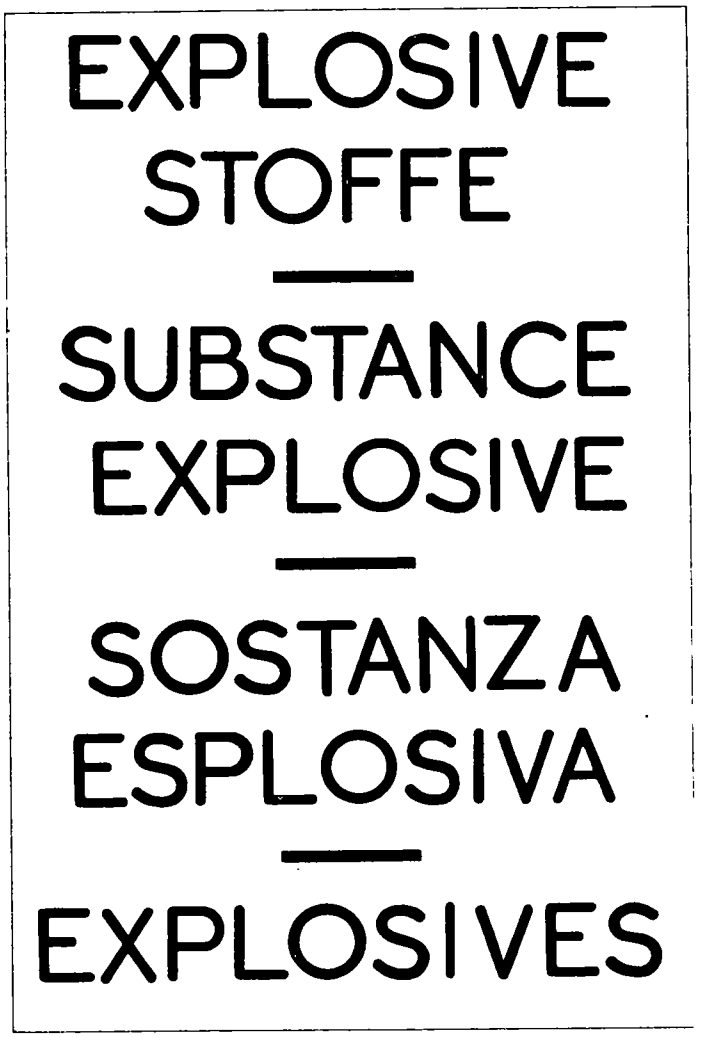


Figure 6-9. Example of a multilingual car label placed on a railcar carrying explosives.

Key	Entries
(1)	Owner's mark and car number.
(2)	Tare weight of car.
(3)	Weight of contents in kilograms.
(4)	Gross weight--total of entries (2) and (3).
(5)	Actual origin station name.
(6)	Destination station.
(7)	Routing when movement through a specific point is desired.
(8)	Date of forwarding.
(9)	Consignee.
(10)	Car seal numbers.
(11)	Movement control number.
(12)	Appropriate block to be circled to indicate the type of supplies in the shipment. For mixed shipments, blocks of all types of supplies included in the shipment to be circled and connected with the appropriate class of supply. (See key (13).)
(13)	Class of supplies in the shipment to be circled. If more than one class is included, the appropriate classes to be circled with connecting lines. (See key (12).)

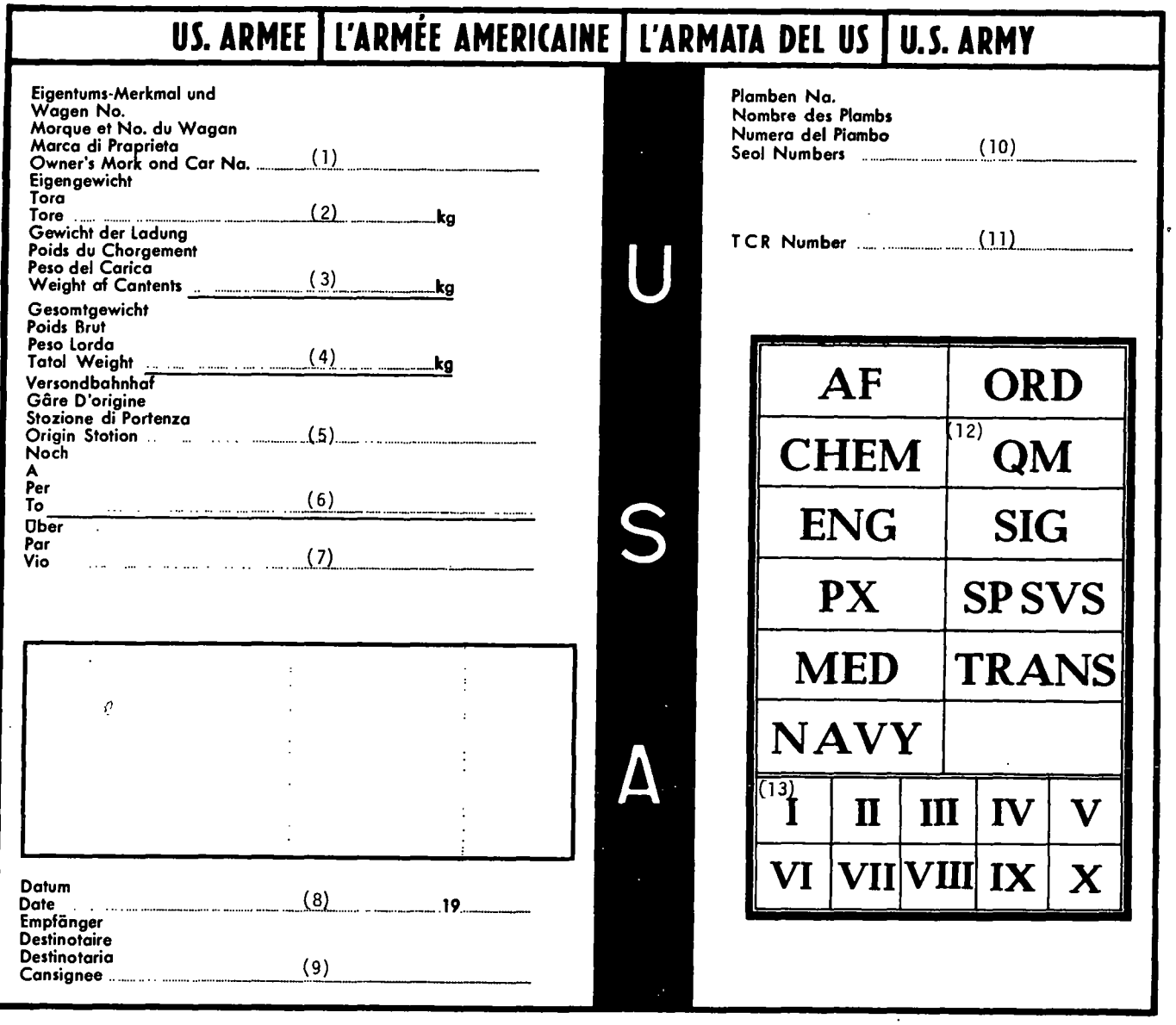


Figure 6-10. Example of a standard railcar label used for identification and as an aid in making security checks.

Section II. MOVEMENT REPORTS

6-10. General

The reports discussed here are established reports normal to the movement control system in any theater or major command. However, these are not all inclusive and, as appropriate, commanders of the theater army support command (TASCOM) and the field army support command (FASCOM) may establish requirements for additional reports whenever they consider that such reports will increase mission effectiveness. In fact, current oversea theaters have established a number of supplemental reports and reporting procedures designed for the movement control operation of the particular theater.[2] However, no attempt is made to discuss them here, particularly since they are the result of internal policies and directives of the oversea command.

6-11. Installation Capacity Report

a. The installation capacity report is used by transportation movement activities at higher echelons to determine the flow of supplies that can be shipped into and out of an installation (for example, a depot), to prevent overloading the installation, and to adjust tonnages among the various modes of transport. It is a one-time report prepared whenever a new installation is activated. The transportation representative at the installation prepares the report for the installation commander and subsequently updates it by reporting any significant changes. When a major permanent change takes place, the installation transportation officer submits a new report. Distribution of the report is determined by theater policy; however, the normal procedure is to prepare three copies: one is retained by the installation transportation officer and the remaining two copies go to the TASCOM movement control agency, which in turn reproduces copies for the regional and branch transportation movement offices. The movement control agency also uses information contained in the installation capacity report as a basis for preparing the facilities and services guide (para 6-27).

b. Preparation of the installation capacity report requires a thorough knowledge of the capabilities and limitations of the installation. In conjunction with representatives of the transport services, the installation transportation officer makes a survey of the installation to determine the mode capabilities of the various operating agencies. Information concerning rail capabilities is of particular interest and includes such items as team tracks,[3] warehouse tracks, and storage tracks; number of cars that can be held in the loading yard without congestion; number of cars that can be spotted on each loading and unloading track; and capacity for switching. Similar information is also required for the other modes that serve the installation. The installation commander can furnish such information as the amount of open and covered storage space, available cranes and their lifting capacity, and the like. With this information, it is now possible to make a final decision as to the overall capacity of the installation to ship and receive. Remember, however, that the capacity of any installation is limited by the weakest link in its cargo-handling operations, whether it be transportation equipment, installation facilities, or availability of labor; each has a marked bearing on the quantity of cargo that can be handled during a given period.

c. Information shown in the installation capacity report includes, but is not necessarily limited to, the following:

(1) Name of installation and consignee code.

(2) Location of installation by map coordinates and by reference to named or numbered streets if in a town or city or by reference to state, national, or main supply routes and distances between readily identifiable locations.

(3) Telephone number, TWX (teletypewriter exchange (commercial)) call sign, and APO address.

(4) Service and class (for example, signal class II and IV).

(5) Type of installation (for example, depot augmented by prisoner of war labor).

(6) Summary of shipping and receiving facilities for freight and passengers by rail, highway, air, and waterway.

(*a*) Rail location and capacity:

Location of railhead and distance to installation.
Railcar capacity of team tracks.
Warehouse tracks and railcar capacity.

[2] Research reveals that one theater has established a requirement for approximately 80 different forms, records, and reports. These include locally developed, standard, and modifications of standard forms, records, and reports.

[3] Team tracks are railroad tracks which permit a vehicle to back up to or pull alongside a railcar for loading or unloading. The term is derived from the days when a team of horses pulling a wagon was used for railcar loading and unloading operations.

Railcar storage tracks.
Total car capacity.

(*b*) Terminal track capacity:

Railcar capacity, team tracks.
Railcar capacity, freight house tracks.
Railcar capacity, classification tracks.
Railcar capacity, storage tracks.
Total car capacity.

(*c*) Highway location and facilities:

Location of truckhead.
Condition of roads within the installation.
Types of roads in installation (surface, availability of turnaround facilities, etc.).
Loading and unloading platforms (number, construction, condition, height, truck or trailer capacity).

(*d*) Airfields and facilities:

Location by map coordinates and distance and direction from installation.
Number, direction, capacity, and direction of runways.
Area (in square feet), surface, and condition of ramp areas.
Servicing facilities (refueling, maintenance).
Terminal facilities for billeting, feeding, and processing passengers.
Road net within the installation.
Storage area (in square feet), open and covered.
Types and capabilities of cargo handling equipment.

(*e*) Water facilities and location:

Location of water terminal and distance to installation.
Number of piers and their length, width, and condition.
Depth of water.
Types and capabilities of cargo handling equipment.
Storage areas and warehouses.

(7) Installation storage area (in square feet), both covered and open.

(8) Heavy lift capabilities by type and maximum lift capacity; if peculiar to a specific mode, so indicate.

(9) If appropriate, capability to handle class A and B explosives.

(10) Passenger destinations to be shown on transportation requests for air, rail, or highway movement.

(11) Average number of prisoner of war laborers available daily for freight handling.

(12) Availablility of facilities for receipt of cargo containers (for each mode of transportation).

(13) Estimated capacity (shipping, receiving, or combination) in short tons:

(*a*) Rail.
(*b*) Truck.
(*c*) Air.
(*d*) Water.

(14) Remarks: any other information concerning capabilities or limitations that would influence the receipt or shipment of cargo.

(15) Inclosures: map of installation and vicinity, showing road nets, rail lines, sidings, piers, docks, loading platforms, warehouses, and air terminal facilities.

6–12. Daily Installation Situation Report

a. Because it presents such a concise, overall picture of the status of transportation movement activities at any given installation, the daily installation situation report, DA Form 1322, is probably the most significant report that the installation transportation officer makes. Staff transportation officers, movement control centers, and transportation movement officers all use this report to analyze daily transportation activities at each installation. From the report they can see whether conveyances are being unloaded and made available for reuse in the system without delay, whether they are being detained for unduly long periods, or whether they are being used for mobile storage. The report also shows the backlog of transport units to be loaded or unloaded and the status of equipment and facilities. Additionally, it provides an insight into changes in installation shipping and receiving capabilities as reflected in holding times and turnaround times, and establishes a basis for isolating problem areas and taking corrective action and—not to be overlooked—readily reveals the receiver's ability to handle an emergency shipment.

b. All installations that load and unload cargo submit a daily installation situation report each day through the transportation movement officer to the TASCOM movement control agency. The operational status of the installation is based upon data from the daily yard check, transportation control and movement documents, rail switching instructions, and personal observation; note that a separate report is submitted for each mode. All this information coming in, as it does, from each installation keeps the movement control agency informed right up to the day concerning the daily transportation activities and conditions throughout the theater.

c. Appendix E illustrates the daily installation situation report and explains procedures for its completion.

FREIGHT EQUIPMENT INSPECTION REPORT DATE 9 Jan 71

CAR INITIALS AND NUMBER	TYPE OF CAR	SPOTTED AT DEPOT NUMBER
KNA 291	Box	703
COMMODITY BEING CARRIED	WAREHOUSE NO.	TRACK NUMBER
Rations	1273	3

CONDITION OF CAR:	FIRST INSPECTION DTG: 090630	SECOND INSPECTION DTG: 091600
FLOORS	Good	Good
SIDES	Good	Good
DOORS	Good	Good
ROOF	Good	Good
VENTILATING SYSTEM	Good	Good
REFRIGERATION SYSTEM	None	None
CARS PROPERLY LOADED:		
LOADED EVENLY		Yes
MAXIMUM LOAD EXCEEDED		No
TONNAGE		30 short tons
LOAD SECURED AND BLOCKED		Yes
DOORS PROPERLY SECURED		Yes
DOORS PROPERLY SEALED		Yes

REMARKS:

CONSIGNOR REPRESENTATIVE	CARRIER REPRESENTATIVE
Harry Deal, CPT, TC, ITO	Frank K. George

Figure 6-11. Suggested format for the freight equipment inspection report.

6–13. Report of Shipment

a. The report of shipment (REPSHIP) is an advance notice of shipment designed to let the consignee know as far in advance as possible that a shipment has been made to him, when it will reach him, what it includes and how much, and by what mode it is coming. As soon as the movement gets under way, the consignor sends the REPSHIP to the consignee, the movement control center, and the origin and destination transportation movement offices. The method of transmission of the REPSHIP depends upon the type of communications available and the distance involved; it may be sent by mail, teletype, messenger, radio, or telephone (when radio or telephone is used, the REPSHIP is confirmed in writing).

b. When operations are conducted in the North Atlantic Treaty Organization (NATO) area, the REPSHIP is in the form of an advice of movement of personnel or an advice of movement of freight as outlined in STANAG 2164 (app S). When NATO forces are not involved, the REPSHIP contains essentially the information shown below (code designators (app B) may be used rather than clear text where applicable):

(1) Personnel.

(*a*) Authority and/or consignment or movement number.

(*b*) Place of departure.

(*c*) Time and date of departure.

(*d*) Number of personnel by appropriate rank or group classification, including unit security designation, if applicable.

(*e*) Destination and estimated time of arrival. (State estimated time of arrival at transfer point, when applicable.)

(*f*) Identification of carrier (inland waterway, air, rail, or highway) by name, number or code designation.

(*g*) Details of baggage and accompanying equipment: location, weight and cube.

(*h*) Name of officer in charge of troops (train).

(*i*) Additional information and instructions, if necessary.

(2) Freight.

(*a*) Authority and/or consignment or movement number.

(*b*) Place of departure.

(*c*) Time and date of departure.

(*d*) Consignor or code designation.

(*e*) Consignee or code designation.

(*f*) Mode(s) of transport, including route.

(*g*) Identification of carrier (inland waterway, air, rail, or highway) number, as applicable.

(*h*) Consignor's number(s).

(*i*) Number of cases per truck, railcar, watercraft, or aircraft.

(*j*) Weight of freight loaded per truck, railcar, watercraf, or aircraft.

(*k*) Cube of freight loaded per truck, railcar, watercraft, or aircraft.

(*l*) Description of commodity in general terms.

(*m*) Destination and estimated time of arrival. (State exchange points and estimated time of arrival at exchange point, when applicable).

(*n*) Additional information and instructions, if necessary.

6–14. In-Transit Reports

a. Each REPSHIP is included in an in-transit file and a cross-reference file maintained by the movement control center (MCC). The in-transit file maintains a record of shipments indexed by vehicle identification number. The cross-reference file is indexed in shipment identification number sequence and is used to gain entrance to the in-transit file when shipment numbers are known.

b. In order that the whereabouts and status of each shipment may be known while it is en route from consignor to consignee, the movement control center requires that certain en route report be submitted to it by designated reporting points. These report are not standardized, since their format is normally prescribed by the TASCOM movement control center. However, their coverage is basically as follows:

(1) The *passing report* contains the identification of a vehicle, the reporting point, and the date and time of passing.

(2) The *hold report* is submitted whenever a vehicle is held without transfer of cargo. The reason for delay is included, along with the normal passing report information.

(3) The *diversion report* identifies the vehicle, giving the time and location and the new destination of the vehicle.

(4) The *transfer report* is submitted whenever cargo is transferred from or to a vehicle except at origin or destination.

(5) When the shipment reaches the consignee, the transportation movement office at destination submits a *completion report* to the movement control center for use in updating the theater in-transit cargo file. When completed, the record of a shipment in the in-transit file at

TROOP TRAIN INSPECTION REPORT

DATE 25 Jan 71

*UNIT IDENTIFICATION 42d FA Battalion TRAIN NO. 1575

FROM Rhein Main AB TO Augsburg

(List all coach/car initials, numbers, and damaged items. If none, indicate.)

COACH/CAR NO. AND TYPE	CONDITION OF COACH/CARS BEFORE ENTRAINMENT (see reverse side)	CONDITION OF COACH/CARS AFTER DETRAINMENT (see reverse side)
DB 132, 1st class	GOOD	GOOD
	* * * * * * * * * * * *	
DB 317, 1st class	GOOD	GOOD

Inspected before entrainment by: (Signature)		Inspected after detrainment by: (Signature)	
1. Entrainment ITO		1. Detraining ITO	
2. OIC Troops (Train) **		2. OIC Troops (Train)	
3. Railway Inspector		3. Railway Inspector	

REMARKS: Use reverse side for detailed explanation of cause of damage. Inspection to be made by military personnel whether or not railway representative is available.

*When security regulations prohibit it, titles of units will not be shown and units will be described by their security serial number.

**To be signed by OIC Troops (Train) or his representative; should be the same officer making inspection at entraining and detraining points, if possible.

Figure 6-12①. Suggested format for the troop train inspection report—front.

INSPECTION PERSONNEL WILL CHECK THE FOLLOWING

1. Coach/car floors free from dirt and in sanitary condition.
2. Seats clean and free from tears.
3. No broken windows or doors.
4. Ventilators in proper order.
5. Lavatories in working order and properly supplied with water.
6. Toilets clean and sanitary; flushing apparatus in working order, and sufficient supply of toilet paper.
7. Water tanks filled (and iced if applicable). Extra water containers available in each coach/car.
8. Light fixtures in working order and coach/car properly lighted for night travel.
9. Platforms and steps of each coach/car safe and secure.
10. Passage used by passengers between coaches/cars to be guarded by diaphragm/covered gangway; if not, arrangements to be made for equipping with chains or heavy ropes.
11. Evergency communication cord working.
12. Fire apparatus working.

ADDED REMARKS

Figure 6-12②. Suggested format for the troop train inspection report—back.

the movement control center is transferred to a historical file of completed movements, and corresponding records are removed from the cross-reference file.

6–15. Freight Equipment Inspection Report

a. The inspection of freight equipment is not a responsibility of the transportation movements office; it is the installation transportation officer who inspects freight equipment before and after loading at origin and before and after unloading at destination. However, freight equipment inspection is discussed here because it involves services of movements specialists assigned to assist the installation transportation officer.

b. The origin installation transportation officer makes two inspections. In company with a representative of the carrier, he makes the first inspection to insure that the equipment is in good operating condition and will, under normal operating conditions, arrive safely at destination. During this inspection, he records any noted equipment deficiencies to help determine liability in the event of damage to cargo or equipment during movement. The second inspection is to insure that cargo has been properly loaded and lashed, that equipment has been sealed and properly documented, and that carrier regulations have been complied with.

c. The destination installation transportation officer and a carrier representative inspect the cars to determine that seals are intact, that no pilferage has occurred, and that, in the case of flatcars or other open type cars, the cargo has not been damaged during transit. After the equipment is unloaded, a second inspection of equipment is made to determine any damage to carrier equipment. Notes and comments made at these inspections are important in the event that damage claims are filed (bear in mind that claims may be made against the Government, as well as against the carrier).

d. The freight equipment inspection report is a locally prepared report with no specific format directed. Figure 6–11 illustrates a suggested format for the freight equipment inspection report.

6–16. Troop Train Inspection Report

a. The troop train inspection report describes conditions of passenger equipment before being loaded at origin and after being unloaded at destination. The origin installation transportation officer is responsible for the preloading inspection and the destination installation transportation officer for inspection after unloading. Both make their inspection in the presence of a carrier representative and the troop (train) commander. A separate entry is made on the report for each car in the train, giving attention to such items as—

(1) Cleanliness of equipment.
(2) Damaged equipment.
(3) Sanitation facilities.
(4) Baggage facilities.
(5) Adequacy of safety equipment.

b. The installation transportation officer makes his report in at least three copies, retaining one and giving two to the troop (train) commander.

c. The inspection report is a locally prepared form, with no specific format directed. Figures 6–12① and 6–12② illustrates a suggested format.

6–17. Report of Packaging and Handling Deficiencies.

The report of packaging and handling deficiencies (DD Form 6) is used to report a shipment received in an unsatisfactory condition. Prepared by the installation transportation officer (ITO) of the receiving activity, it is submitted to the commander or chief of the agency appointing the ITO, with copies to the ITO of the shipping activity. General guidelines for the use of DD Form 6 are outlined below:

a. The report of packaging and handling deficiencies is used when—

(1) A military installation receives from another military agency, vendor, or individual, a shipment in a damaged or otherwise unsatisfactory condition resulting from improper preservation, packaging, packing, marking, loading, handling, or stowage, and attributable either to the shipper or to an occurrence during transit.

(2) Deficiencies described in (1) above involve ammunition or other explosives and dangerous material, regardless of whether damage or unsatisfactory condition has resulted.

(3) There is evidence of excessive preservation, packaging, packing, or dunnage.

(4) An unsatisfactory condition is noted in shipments of aircraft engines shipped on dollies or in half-cans.

b. The report of packaging and handling deficiencies is not used—

(1) To report overages, shortages, improper documentation, shipment of incorrect items, or similar deficiencies.

(2) As the document for rejecting shipments, requesting surveys, or initiating claims.

(3) When the damage or deficiency involves an amount of 10 dollars or less, except that—

(*a*) All marking deficiencies that adversely affect the delivery, proper handling, or stowage of a shipment are reported on DD Form 6.

(*b*) Deficiencies in packing, handling, or loading that represent a cost of 10 dollars or less are reported if it is probable that a repetition of the deficiencies will result if not reported (for example, deficiencies in multiple/partial shipments being made by a specific shipping activity) and when the deficiencies are the fault of the same shipping activity.

c. Detailed instructions concerning the use of DD Form 6 are contained in AR 700–58.

6–18. Reporting Shipment Discrepancies

Shipping discrepancies are documented on SF 361, (DISREP), when shipment damage evidence indicates possible ocean carrier damage. This report is specifically applicable to MSC container agreement SEAVANs/MILVANs, and may also apply to cargo loaded in roll-on/roll-off trailers, CONEX containers, and other shipments in consolidation.

Section III. MOVEMENT RECORDS

6–19. General

Basically, transportation movement records serve two purposes: they provide a means of accounting for the use of transportation resources, and they serve as a basis for determining how and where movement operations can be improved to give more effective service for the resources expended. Normally, the theater army support command (TASCOM) commander prescribes the records to be maintained at the different echelons in the theater or theater army. Since they are not necessarily standardized between theaters, no attempt is made to present an all-inclusive discussion here. However, certain records are normally common to movement operations in any theater; these are discussed below.

6–20. Transportation Officer's Journal

Movement personnel have a special need for keeping and using a journal to maintain a day-by-day record of their activities. A record should be made of every action taken on a movement, including contacts made and followup actions. Notations are also made of telephone calls, wires, incoming and outgoing messages, and other events that have a bearing on the operation of the transportation office. The chief use of the journal is as a reference in event of any questions arising concerning any phase of the operation; additionally, however, the journal is quite helpful in orienting and training new personnel by tracing the actions and procedures involved in various phases of the daily operation.

6–21. Transportation Control and Movement Document Register

The transportation control and movement document (TCMD) register is a day-to-day record of all TCMD's originating within the area of responsibility of the transportation movement office. A suggested method for keeping this record is to divide a ledger type book into vertical columns for data entries. Headings for the columns should include, as a minimum, the date, transportation control number (TCN), consignor, consignee, mode (include vehicle identification; for example, truck number(s)), and cargo cube, weight, and number of pieces of the shipment.

6–22. Record of Transportation Movement Release

A transportation movement release (TMR), being the authority for movement of a shipment, authorizes the dispatch of transport equipment, verifies the capability of the consignee to receive the shipment, and identifies the specific movement during transport (the TMR is discussed in detail in paragraph 7–14). In order to complete the record of shipments maintained by the transportation movement officer for reference purposes, the TMR should be recorded with its corresponding TCMD. A suggested method for recording the TMR is to leave a vacant line below the TCMD entry on the TCMD register (para 6–21 above) and, when the shipment is released for movement, enter the TMR number for the shipment in this vacant line.

6–23. Accountable Forms Ledger

A record must be kept of serially numbered accountable forms such as transportation requests, military warrants, TCMD's (when serially numbered and used as a basis for reimbursement of the carrier), and any other document which may serve as a basis for payment.

The ledger should account for blank documents received and issued (by serial number), and a separate ledger is maintained for each type of accountable document. It must be properly safeguarded and accessible only to the individual authorized by published orders to issue the particular document. Such ledgers are periodically audited by higher authority.

6–24. Equipment Record File

a. The railroad car record (DD Form 1092, prepared by the installation transportation officer, is used to maintain a daily record of each unit of transportation (to include railcar, truck, barge, container, or other type of equipment) that comes into or leaves an installation. The file is maintained on a cut sheet DD Form 1092, which is normally kept in a looseleaf notebook. Separate files are kept for each mode of transport, and each file consists of two books, one for inbound transport and one for outbound.

b. In an oversea theater, the record file serves essentially two purposes: it is an aid in tracing lost or overdue transport equipment and, perhaps most important, it quickly identifies delays and abnormal detention of transport so that immediate corrective action can be taken. Additionally, when US forces use host nation transport, the file serves as a source document in computing demurrage charges.

c. Pages of the file are numbered from 000 to 999. The page number represents the last three digits of the transport vehicle identification number which is entered in the upper right or left hand corner of the page. The balance of the digits preceding these three numbers are entered in the left hand column of the form as the equipment record number. Information re-

RAILROAD CAR RECORD 189[a]

INITIAL[b]	CAR NUMBER[c]	TYPE CAR	CONTENT	ARRIVAL NOTICE		CONSTRUCTIVELY PLACED		ACTUALLY PLACED		RELEASED		DAYS		GOVERNMENT B/L OR OTHER[d]	REMARKS
				DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DEB	CR		
RJ	276	Box	PX Supplies			1	1000	4	0800	7	1500	1		D-3428	
DO	23	Hopd.	Coal					7	1200	9	0600	0	0	F-1319	
LNW	112	"	"					8	1200	10	0600	0	0	F-1323	
LNW	74	"	"					12	1200	14	0600	0	0	F-1356	
KQ	46	"	"					19	1200	21	0600	0	0	F-1362	
RJ	29	Refrig.	Fzg. Meat					21	0800	22	0600		1	D-3629	

DD FORM 1 NOV 67 1092 REPLACES EDITION OF 1 JAN 66, WHICH WILL BE USED.

[a] Last three digits of car number.

[b] Initials of carrier when applicable.

[c] Digits preceding last three digits of car number.

[d] May also be military warrant number, TCN, etc.

Figure 6–13. Sample page from equipment record file.

DAILY YARD CHECK		DTG: 031800 April	
DEPOT NUMBER US Army Depot, Kaiserslautern		CHECKER Levi O. Shell LEVI O. SHELL, Captain, TC	
CAR NUMBER AND INITIAL	TYPE OF CAR	CONTENTS	STATUS
TRACK NO. 1			
DB 286	Box	Empty	
DB 298	Box	Empty	
TRACK NO. 2			
No cars			
TRACK NO. 3			
DB 216	Box	Empty	
TRACK NO. 4			
DB 6134	Box	Laboratory and glass-ware	Partially loaded; loading will be completed during night; ready for shipment by 0630.
TRACK NO. 5			
DB 6832	Box	QM II and IV	New car, loaded, arrived 031700 April.
TRACK NO. 6			
DB 291	Box	Rations	Partially loaded; loading will be completed during night; ready for shipment by 0630.
TRACK NO. 7			
DB 6548	Box	QM I	Partially unloaded; arrived 031300.

Figure 6–14. Suggested format for the daily yard check.

quired to complete the remaining entries on the form is found in the TCMD, rail switching instructions, the daily yard check, and similar sources. Note that DD Form 1092 is designed for use with railcars; however, when it is used for other modes, the column headings can be changed accordingly, while still showing the same type of information. This record makes it quite simple to answer an inquiry about a transport vehicle or its contents by turning to the proper page, finding the line on which the conveyance is listed, and checking across the columns for its record while at the installation. Figure 6–13 illustrates a page of the equipment record file.

6–25. Daily Yard Check

The daily yard check is prepared by the installation transportation officer for all rail trackage within the confines of the installation. Responsibility for checking areas outside the installation lies with the mode operator. Generally, the term "yard check" is associated with a rail yard. Bear in mind, however, that a commander may request a daily check of other types of equipment, in which case the daily yard check may be used for this purpose. For instance, if a port does a large volume of barge traffic, the port commander may request a daily check of barges by berth; in similar fashion, a daily check is

RAIL SWITCHING INSTRUCTIONS — DTG: 032350 April

TO: CO, 813th Rwy Operating Group — FROM: TMO (Br) — FOR: ITO, Depot 703

CAR INITIAL AND NUMBER	KIND	CONTENTS	CAR PICK-UP POINT	DESTINATION OF CAR	TIME AND DATE	REMARKS
KNA 216	Box	Empty	Track 3	Track 6	040630 April	To be loaded
KNA 291	Box	Rations	Track 6	AVITO Q-523	040630 April	
LNW 6134	Box	Laboratory and glassware	Track 4	PINTO M-111	040630 April	Do not hump

NAME (TYPED OR PRINTED)
JOHN E. SMALL
Major, TC

SIGNATURE
John E. Small

Figure 6-15. Suggested format for rail switching instructions.

made of the truck trailers at a trailer transfer point. The daily yard check contains such information as types of equipment, contents (including supply class), and present status (location, empty, loaded, or in the process of being loaded or unloaded). Where there are several tracks in a yard, each must be checked completely and noted by number on the yard check form. Tracks or sidings within an installation are usually numbered 1, 2, 3, 4, etc. There is no set time when the daily yard check should be made, but it is usually at the beginning or the end of a workday. The exact time is normally governed by the volume of traffic. The primary purpose of the daily yard check is to maintain accurate and current information concerning all transportation equipment in the installation for use in conjunction with other records and reports maintained by the installation transportation officer. For example, the daily yard check will help in checking the carrying out of rail switching instructions and in requesting rail switching services of the transportation movement office. The transportation movement office issues rail switching instructions to the rail mode operator upon request of the shipping installation. Essentially, these instructions tell the mode operator where and when to spot cars for loading or unloading. Figure 6-14 presents a suggested format for the daily yard check. A sample format for rail switching instructions is illustrated at figure 6-15.

Section IV. MOVEMENT PUBLICATIONS

6-26. Transport and Travel Regulations

Normally, the theater army support command (TASCOM) commander publishes transport and travel regulations for the theater army. These regulations supplement joint or Army regulations for transportation documentation requirements; for packing, marking, and labeling of shipments; and for operational policies and procedures.

6-27. Facilities and Services Guide

The facilities and services guide is a directory published by the TASCOM movement control center. It provides facility and capability information for each shipping or receiving activity in the theater. Based on information contained in the installation capacity reports submitted to the center by shipping and receiving activities, the guide shows for each activity such information as location; type of supplies handled by service and class; the transportation movement office serving the installation and its location, code designator, telephone number, and teletype and radio address; modes available and the service they perform; terminal facilities available; and appropriate special notes. The primary purpose of the facilities and services guide is to provide information to all shippers and their installation transportation officers and local transportation movement offices as to the correct identification of the receiving installation, its capabilities, the best mode of transport to be used, and other information required in the preparation of transportation documents. In order to keep the facilities and services guide information timely and accurate, all installation transportation offices and transportation movement offices must promptly report changes through channels to the movement control center. Figure 6-16 illustrates a sample page of a facilities and services guide.

6-28. Local Directory

Although the facilities and services guide is a valuable source of information when consigning, billing, and routing shipments, TMO's who are performing on-the-spot supervision and control need still further details. Therefore, each transportation movement officer prepares a local directory for his specific area of responsibility. As in the facilities and services guide, the type and location of each installation, area, and unit are given; additionally, the local directory includes the names and telephone numbers of individuals with whom the transportation movement officer will be doing business. A map showing the names and locations of activities in the transportation movement officer's area of responsibility completes the local directory file. In a busy transportation movement office, where arrangements for hundreds of shipments may be made daily, the local directory can help the transportation movement officer provide prompt service to units and installations in his area. Additionally, the local directory is invaluable when orienting newly assigned personnel. Figure 6-17 illustrates a suggested format for a local directory.

NAME - Hohenfels Training Area.
LOCATION - 2 Km West of Hohenfels, Germany, on Route 170.
POST OFFICE - APO 09252, Hohenfels Training Area.
TELEGRAPH OFFICE - Post Signal Office, Hohenfels Training Area.
TELETYPE OFFICE - Post Signal Office, Hohenfels Training Area.
RADIO OFFICE - Post Signal Office, Hohenfels Training Area.
SERVING BRANCH TMO - Regensburg, TP No. Reg. Mil 411, TT Address - BTRMOV, No Radio.

1. GENERAL. Railhead located at Parsberg, Germany, 12 kilometers East of Hohenfels Training Area on Route 170. Leased trackage from railhead to training area can handle up to three cars or tonnage up to 150 short tons. Two airfields are available, one to accommodate helicopter and light plane traffic, the other for heavy traffic up to and including four engine craft.

2. FREIGHT. Destination shown on freight waybills will be as follows:

a. RAIL.
(1) CARLOAD: Hohenfels Training Area, Germany.
(2) LESS-THAN-CARLOAD: Parsberg, Germany (railhead).

b. TRUCK. Less-than-truckload and truckload, no exceptions, all to Hohenfels Training Area, Germany (Ordnance V, Ammunition, and heavy weapons to north dump).

c. AIR. Hohenfels Training Area.

3. PASSENGERS. Destination shown on general railway warrant will be as follows:

a. RAIL.
(1) Individuals and parties (up to 22) traveling in regular train service: Parsberg, Germany (origin ITO will notify Hohenfels Training Area ITO as to train number and estimated time of arrival).
(2) One or more cars and special trains up to 15 cars: Hohenfels Training Area (spur siding may be used for detraining; no platform).

b. BUS. Military traffic only--Hohenfels Training Area.

c. AIR. Militray traffic only--Hohenfels Training Area.

4. CONEX SERVICE. This installation has equipment and facilities to handle CONEX transportation.

5. All documentation will be addressed to: Transportation Officer, Hohenfels Training ARea, APO 09252, US Army (for telephone contact call Hohenfels operator, then Hohenfels military extension 672 or 673).

Figure 6-16. Sample page of a facilities and services guide.

NAME	TYPE	LOCATION	PERSONNEL CONTACT		PHONE
DEPOT 408	QM II-IV	3.2 kilometers west of railroad station on highway 88	COL Scott MAJ Johnson CPT Jones SGT Brown CPL Smith PFC Long	CO ITO Chief, Freight Section NCOIC, Freight Section Documentation Clerk Yard Clerk	40 41 42 42 44 45
DEPOT 602	QM I	6.4 kilometers north of railroad station on highway 16	LTC Wright CPT Amos LT Cox SGT Ball SGT Day	CO ITO Chief, Freight Section NCOIC, Freight Section Shipping Clerk	60 61 62 62 65
DEPOT 703	SIG II-IV	8.05 kilometers south of railroad station on highway 79	COL Fisk MAJ George CPT Knight SGT James CPL Lockman	CO ITO Chief, Freight Section NCOIC, Freight Section Clerk	71 77 75 75 77
STAGING AREA	STAGING TROOPS	3.2 kilometers east of railroad station on highway 88	COL Kay CPT Jay LT Ball SGT Vaughn LT Curry SGT Yancy	CO ITO Chief, Replacement Section NCOIC, Replacement Section Chief, Unit Movements Section NCOIC, Unit Movements Section	90 91 92 92 93 93
21st RANGER BATTALION	INFANTRY BATTALION (UNIT)	16.1 kilometers north of railroad station on highway 79	LTC Smith MAJ Hill CPT Scurry SGT Busby	CO S4 (ITO) Assistant S4 NCOIC	80 82 82 82

Figure 6-17. Suggested format for a local directory.

CHAPTER 7

PLANNING AND OPERATIONS

(STANAG'S 2155, 2156, 2159, 2164, AND 3543; SOLOG AGREEMENTS 27R AND 31R)

Section I. MOVEMENTS

7–1. Responsibility

a. Transportation resources within a theater include those of allied forces and host nations, as well as those of US forces. Even so, with all these resources, past experience has been that there is never enough transportation to meet all requirements of all users; only so much is available, and everyone must have an equitable share. For this reason, it is necessary that the total movement capabilities be weighed against the requirements of each user and, based on relative priorities, allocation be made of the total transport resources. In consonance with the first principle of movements (SOLOG 27, app H) that "control of movements will be centralized to the highest level at which it can be adequately exercised," the theater commander allocates to the Navy, the Air Force, and the theater army commander a portion of the total transport capability. Normally, to carry out the allocation procedures the theater commander establishes a joint military transportation board (JMTB), composed of representatives from each of the service components and major joint forces and, when appropriate, from host and allied nations. On the basis of forecast requirements of the service components, the JMTB recommends the allocation of all transportation resources available to the command according to priorities established by the theater commander.

b. The theater army commander is responsible for that portion of the theater necessary to conduct the land operations. He provides the coordinates surface transportation in support of all US land forces and controls the use of space allocated to the Army for intratheater or intertheater airlift or sealift. The theater army commander suballocates the total Army transport capability to the theater army support command (TASCOM) commander in the communications zone and the commander of the field army in the combat zone. He gives these commanders the responsibility for managing, within prescribed guidelines, the movement capability so allocated and for regulating and coordinating the use of the road space within their respective areas of responsibility. In the field army, the army commander delegates these responsibilities to the field army support command (FASCOM) commander.

c. Where a subordinate unified commander is delegated the responsibility for controlling and coordinating transportation and the use of allocated transportation space, he may establish a joint or unified movement control center (MCC) composed of members of the MCC and traffic headquarters, liaison members from the next higher echelon MCC and traffic headquarters (when applicable), and representatives from allied and host nation transportation movement organizations.

7–2. Movement Planning and Programing

a. The objective of movement planning is to allocate transportation requirements to transport capabilities in consonance with established priorities. The movement planning process, which results in the movement program, is the method by which the commander's requirements for moving personnel and freight are met, and consists essentially of three basic steps:

(1) Developing the distribution pattern.

(2) Developing and preparing the supply and personnel movement forecast.

(3) Preparing, publishing, and distributing the movement program.

b. The first step, that of developing the distribution pattern, is discussed in detail in FM 55–10, and is not addressed in this manual. De-

velopment of the supply and personnel movement forecast includes both forecasts of shipping requirements and forecasts of transport capability that will be available to the command during the period considered. When authenticated, the end product of movement planning—the movement program—serves as guidance and information to keep the movement organization, mode operators, supply managers, and other interested agencies current concerning planned logistic activities. The basic steps in developing the movement program are—

(1) Determination of movement requirements.

(2) Determination and analysis of movement capabilities.

(3) Selection and allocation of transport modes.

(4) Coordination and resolution of priority conflicts.

c. The time period covered in a movement program is governed by the tactical situation, the ability of supply and personnel agencies to forecast their requirements, and the ability of the transport services to forecast their capabilities. A desirable cycle for manual processing is 14 days, for which a firm forecast of requirements is shown for the initial 7 days and a tentative forecast for the succeeding 7 days. This method minimizes the requirement for adjustments during the initial period and gives a more accurate overall basis for planning. Under this procedure, a new planning cycle is initiated every 7 days for the following 14 days.

7–3. Determination of Movement Requirements

a. Movement Requirement Information. Movement requirement information is specified by the command upon recommendation of the movement control center (MCC).

(1) Use of a standard format is helpful in determining movement requirements. Information contained in the format should include—

(*a*) *Materiel being shipped.* This is normally expressed in terms of the class of supply and the estimated short tons (or measurement tons when appropriate) of the shipment. The movement programers normally are not concerned with an inventory of specific items within a class of supply; however, items requiring special handling must be specified so that their characteristics can be readily identified. For example, heavy lifts and oversize cargo should be identified by nomenclature, number of units, dimensions, short ton weight of each lift, and other special handling requirements. Items requiring controlled temperatures or environment must also be identified.

(*b*) *Personnel being transported.* Personnel normally are listed as troops, patients, civilians, prisoners of war, and such other categories as will assist the movement control office in selecting the mode of transportation.

(*c*) *Origin and destination.* This information should include both the specific shipping and receiving agency designation and location by name and map coordinates. Unit designator codes will be used. For example, a proper designation would be "AK4GA4 C&D Point, Mannheim Kaefertal, Germany MU 605827."

(2) Units requiring additional transport support to carry out a unit movement submit requests for movement in accordance with STANAG 2156, Transport Request and Reply to Transport Request (app P).

(3) Submission of properly authenticated movement requirements to the MCC or transportation movement office (TMO) is sufficient evidence that the requirements are authorized. Transportation movement personnel will not question the validity of the requirement. However, they will question obvious errors in the requirement and will bring them to the attention of the proper authority. They will also question any requirements which will lead to a violation of the maximum-use principle of movements; for example, if one shipment calls for the forward movement of 100 tons of concertina wire while, at the same time, a retrograde requirement exists to move 110 tons of the same item.

b. Planning for Incoming Surface Shipments. The discussion of the TASCOM transportation movement control agency in chapter 2 points out that a significant function of the agency as an extension of the transportation command is to provide interface between the CONUS (continental United States) movement management system and that of the oversea theater. The following subparagraphs discuss how this interface is carried out.

(1) *Cargo movements.*

(*a*) *Cargo traffic message.* When a vessel leaves CONUS bound for the theater, the departure terminal sends a cargo traffic message to the planned destination terminal. This message, illustrated in figure 7–1, is sent within 24 hours after a ship departs CONUS if the voyage time is expected to be less than 8 days, or within 48 hours if more than 8 days. Information con-

tained in the cargo traffic message includes the name of the ship, time and date of departure, estimated time of arrival at the first port of call, subsequent ports, and a breakdown of the tonnage for each port in long tons and measurement tons by military service. Of particular significance to transport planning, the cargo traffic message also provides the size and location in the vessel of heavy lifts and of special or hazardous cargo and specifies any unusual berthing requirements.

(*b*) *Ocean cargo manifest.* Depending on whether automatic data processing equipment facilities are available, the CONUS terminal airmails or transceives an ocean cargo manifest (using DD Form 1385) or cargo manifest punched card to the port of debarkation (POD), water terminal clearance authority (WTCA), Military Sealift Command (MSC), and the carrier. Upon request, the POD will send a copy of the manifest to the TASCOM movement control center and the materiel management center. The ocean cargo manifest contains detailed information of exactly what is aboard the vessel. The materiel management center reviews the manifests and, based on command policy or direction, advises the MCC concerning any changes to destinations of the manifested cargo. Figure 7–2 illustrates a sample completed ocean cargo manifest.

(*c*) *Ship's destination meeting.* The MCC recommends to the TASCOM assistant chief of staff (ACofS), movements (through the transportation command), the port or ports of discharge for the vessel. The recommendation is based on cargo destinations; projected port capacities, capabilities, and workloads; and capacities and projected workloads of the various segments of the transportation system. The TASCOM ACofS, movements, then convenes a ship's destination meeting to decide on the appropriate port or ports of discharge. Present at the meeting are representatives from each service, the TASCOM staff, the MSC, the principal mission commands (personnel, materiel, and transportation), the MCC, the materiel management center, and the terminal operators. It is the responsibility of the consignees of cargo stowed aboard the vessel to provide the ACofS, movements, with shipping directives indicating the initial destination of the cargo.

(*d*) *Cargo disposition instructions.* With the ship's destination and the initial destination of all cargo determined, the MCC is now ready to make final plans for reception of incoming shipments and clearance of the terminal. The MCC prepares cargo disposition instructions (CDI's) and determines the mode of transport to be used in moving the cargo from the terminal of discharge to its designated depot. CDI's are directives to the terminal commander and to transport services to receive and move the cargo as specified. A separate CDI is issued for each vessel in a form similar to that shown in figure 7–3. Information shown on the CDI includes the point of discharge, the name of the vessel, the priority of discharge and clearance, the disposition of all cargo aboard, and the mode of transport from the port to destination. The CDI's, vessel manifest information, and hatch lists are sent to the terminal battalion responsible for the terminal at which the vessel is to be discharged. The terminal commander then uses this information to plan the vessel discharge, and coordinates with the local TMO for placement of transport equipment to move the cargo through the terminal. The terminal commander prepares and forwards advance transportation control and movement documents (TCMD's), and the MCC sends the advance TCMD's to consignees so that they can plan to receive shipments. The TCMD's are used for vehicle waybills or shipping documents for onward movement to the ultimate consignees.

(2) *Personnel movements.* Army passenger movements into and out of a terminal are handled in much the same way as cargo. Shortly after the vessel leaves the United States, a passenger list is forwarded to the oversea terminal. The MCC coordinates with the personnel and administration center of the personnel command on all movements of individuals and units. Until they are cleared from the terminal, troop units are billeted at the staging area near the terminal. Such a staging area is operated by a staging area unit that is normally attached to the US Army terminal group. The staging area has messing and billeting facilities for transient troop units and transient personnel.

c. Planning for Incoming Air Shipments. Intertheater airlift is used to move personnel, equipment, supplies, and mail for all agencies of the Department of Defense. (Information on the capabilities of the cargo and passenger handling systems at other nations' main and staging bases for long range aircraft is obtained as prescribed in STANAG 3543) (app W). The Military Airlift Command (MAC) provides the bulk of movement, supplemented by MAC-procured commercial accommodations as required. Since MAC intertheater flights are primarily on an established schedule, the MCC is able to reason-

JOINT MESSAGEFORM						SECURITY CLASSIFICATION: UNCLASSIFIED			
PAGE	DRAFTER OR RELEASER TIME	PRECEDENCE ACT	PRECEDENCE INFO	LMF	CLASS	CIC	FOR MESSAGE CENTER/COMMUNICATIONS CENTER ONLY DATE – TIME	MONTH	YR
1 OF 1	231615	RR			UU				
BOOK NO	MESSAGE HANDLING INSTRUCTIONS								

FROM: MOTBA OAKLAND

TO: TERM COMD PUSAN

TERM COMD INCHON

MILSTAMP CARGO TRAFFIC

USNS MARINE FIDDLER (TAK) DEPARTED 301420Z MOTBA (OR 3DK). PUSAN (OR UD6). ETA 17 FEB. INCHON (OR UC2). TOTAL CARGO 1905L 4726M. PUSAN (OR UD6) 875L 2169M. DECK ARMY 20 VEHICLES 35L 300M AF 1 TRUCK 6L 22M. HOLD ONE ARMY GENERAL 78L 180M. HOLD TWO ARMY GENERAL 100L 225M. HOLD FOUR AF GENERAL 340L 625M 6 TRUCKS 36L 132M ARMY GENERAL 100L 250M. HOLD FIVE ARMY 150L 325M. THROUGH CARGO HOLD ONE INCHON (OR UC2) AF GENERAL 75L 182M ARMY GENERAL 100L 260M.

6 5 4 3 2 1 0

DISTR:

0

DRAFTER TYPED NAMED, TITLE, OFFICE SYMBOL AND PHONE	SPECIAL INSTRUCTIONS
I. M. REDDY, Clk, Exp Trf Div	
RELEASER: TYPED NAME, TITLE, OFFICE SYMBOL AND PHONE: WILL SENDE, Dir, Exp Trf Div	
RELEASER: SIGNATURE: Will Sende	SECURITY CLASSIFICATION: UNCLASSIFIED

DD FORM 1 JUL 68 173 REPLACES OD FORM 173, 1 NOV 63 AND OD FORM 173–1, 1 NOV 63, WHICH ARE OBSOLETE.

GPO : 1968—048—16—80375-1 335-398

Figure 7–1. Cargo traffic message.

CARGO MANIFEST

AIR	AIRCRAFT DATA: CARRIER	A/C NO	A/C MODEL	DEST CODE	REF	DESTINATION	MISSION DATA: ND	SU	DATE	ALW WT	ALW CU	MANIFEST ID: STA	FY	TY	NO	PAGE NO

SURFACE	POE	DATE SAILED	VOYAGE DOCUMENT NO	POD	REF	VESSEL NAME	STATUS	SUST	TRUCK NO	REMARKS	PAGE NO
		0010	1MJ A3287	UM1		EXPRESS TRAIL	F1				1

DOC ID	VEHICLE TRAILER OR CNTNR NUMBER	YR / MAKE; CNTNR NUMBER; COMMODTY DESCRIP	COM CODE	CAR GD EXC	VOYAGE DOC ND: AIR / SEA / DOM; TRNS PT	PORT OF DISCH	TYPE PACK	TRANSPORTATION CONTROL NUMBER	CONSIGNEE: SERV	ACTVTY ADDRESS	PRIORITY	NAME / AMMO LOT NO / NOMEN; DIMENSIONS: RDD	PROJ	STOW LOC	TRANS ACCT	IDENTIFICATION NO OR REMARKS	PIECES	WEIGHT	CUBE
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	BTWA0183340027XXX	BTWA01		3	000				2LHAA452	2	384	25
TXR			658	ZZ	3287	UM1	BX	BTWA0183340027XXX	BTWA01		3	CIRCUIT BREAKERS SWITCHES							
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	BTWA0183340027XXX	BTWA01		3	000				2LHAA452			
TXR			658	ZZ	3287	UM1	BX	BTWA0183340027XXX	BTWA01		3	CIRCUIT BREAKERS SWITCHES					1	120	6
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	BTWA01B3340027XXX	BTWA01		3	000				2LHAA452			
TXR			658	ZZ	3287	UM1	BX	BTWA01B3340027XXX	BTWA01		3	CIRCUIT BREAKERS SWITCHES					1	92	5
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	BTWA01B3340027XXX	BTWA01		3	000				2LHAA452			
TXR			65B	ZZ	32B7	UM1	BX	BTWA01B3340027XXX	8TWA01		3	CIRCUIT BREAKERS SWITCHES					1	92	5
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	8TWA01B3340027XXX	BTWA01		3	000				2LHAA452			
TXR			658	ZZ	3287	UM1	BX	8TWA01B3340027XXX	8TWA01		3	CIRCUIT BREAKERS SWITCHES					1	92	5
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	BTWA01B3340027XXX	8TWA01		3	000				2LHAA452			
TXR			658	ZZ	3287	UM1	BX	BTWA01B3340027XXX	BTWA01		3	CIRCUIT BREAKERS SWITCHES					1	92	5
TXJ		ELEQUP	658	ZZ	3287	UM1	BX	BTWA0183340027XXX	BTWA01		3	000				2LHAA452			
TXR			658	ZZ	3287	UM1	BX	BTWA0183340027XXX	BTWA01		3	CIRCUIT BREAKERS SWITCHES					1	92	5
TXJ		ELEQUP	658	ZZ	32B7	UM1	BX	BTWA0183340027XXX	BTWA01		3	000				2LHAA452			
TXR			658	ZZ	3287	UM1	BX	BTWA01B3340027XXX	BTWA01		3	CIRCUIT BREAKERS SWITCHES					1	92	5

SAMPLE

ITEMS HAVE BEEN LOADED		ITEMS HAVE BEEN RECEIVED EXCEPT AS CIRCLED NOTED ON REVERSE SIDE		TOTALS		
DATE	SIGNATURE OR LOADING AGENT	DATE	SIGNATURE OF UNLOADING AGENT	DATE	SIGNATURE OF RECEIVING AGENT	

DD FORM 1588 1 Apr 66 — REPLACES EDITION OF 1 APR 63 WHICH MAY BE USED

NOTE: BTWA01 used in TCN is fictitious.

Figure 7–2. Ocean cargo manifest.

ably predict flight arrivals for the period of time considered. The aircraft manifest data accompany the aircraft when it departs the CONUS aerial port and, if the communications capability will insure receipt before the arrival of the aircraft at the oversea aerial port, the manifest data are also electrically transmitted. Based on the forecast of incoming airlifted freight and passengers, the MCC determines the mode and amount of transportation required for onward movement of the cargo. If required, the air terminal movement control team (LE or LF, TOE 55–580) has authority to commit the supporting terminal transfer unit.

d. Intratheater Movement Requirements. Shippers submit their needs for transportation for the planning cycle through movement channels to the MCC. The requirement information is usually expressed in terms of the class of supply and the estimated short tons (or measurement tons when appropriate) of the shipment. The movement programers do not normally need an inventory of specific items within classes of supply; however, items requiring special handling are named so that transportation characteristics can be readily identified. For example, heavy lifts should be expressed in units, dimensions, and short tons and items requiring controlled temperatures should be so listed. Personnel are usually shown as troops, patients, civilians, prisoners of war, or other categories which affect the mode of transport needed. Requirements for intratheater movement should include those for retrograde as well as those for forward movement. Planning for retrograde movement should make maximum

1 February 1971
(Date)

CARGO DISPOSITION INSTRUCTIONS

TERMINAL OF DISCHARGE: Kolbe

THE Kolbe TERMINAL COMMANDER WILL ARRANGE FOR THE PROMPT DISCHARGE OF THE VESSEL SHOWN AND THE CLEARANCE OF ITS CARGO IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS:

VESSEL: John Randolph

DRAFT: 29 ft

BEAM 56 ft

LENGTH 480 ft

PRIORITY:

THE CLOTHING FOR ARMY DEPOT AT Astrido WILL BE GIVEN FIRST PRIORITY IN DISCHARGE AND DISPATCH.

MARKS	DESCRIPTION	
FK4304 7003 X004 XXX	500 CS CLII TROUSERS, MEN'S, COTTON, 9-OZ OLIVE GREEN 107 200 CS CLII BOOTS, COMBAT, MEN'S, LEATHER	CONSIGNEE: ARMY DEPOT: Astrido ROUTE: Rail to Wythe: then motor to depot
* *	* *	
	WEIGHT 500 TONS	
FK4506 4279 X015 XXX	600 CS CLII TROUSERS, OD33 400 CS CLII BOOTS	CONSIGNEE: ARMY DEPOT: Kalam ROUTE: Motor to depot via Munden
* *	* *	
	WEIGHT 600 TONS	
* *	* *	* *

Figure 7-3. Extract of cargo disposition instructions.

use of mode equipment that has made forward delivery and would return empty to the rear area if not used for retrograde.

e. Planning for Intertheater Retrograde Movements by Surface. Procedures for intertheater retrograde surface movements by MSC are similar to those for inbound movements. The shipping activity forwards its requirements through movement channels to the TASCOM MCC, which submits the requirements, in the form of a forecast, to the office of ACofS, movements, TASCOM, which normally has a representative to maintain liaison with the JMTB and the MSC (MSC designates the ship for the retrograde movement). When space has been allocated for the movement, the consignor complies with TASCOM standing operating procedures concerning the offering of cargo to the transportation movement organization for final coordination with the appropriate terminal commander in order to obtain required port release number and movement instructions.[1] Before issuance of the port release number, the terminal concerned will–

[1] The requirement for retrograde movement may necessitate that scrap and salvage brass and vehicles be moved from the field army area to salvage activities in the communications zone as nonprogramed movements without waiting for the formal cargo booking and vessel nomination procedures to be carried out.

Determine the time the shipment should reach the terminal.

Designate the earliest and latest date the shipment can be handled at the terminal.

When the consignor receives the port release number, the movement is processed in the same manner as any other movement requirement.

f. Planning for Intertheater Retrograde Movement by Air. The procedure for intertheater retrograde air movements is similar to that for inbound movements. Requirements are placed on the MCC through movement channels by the shipping activity. The MCC consolidates the requirements and forwards them to the ACofS, movements, in the form of forecasts. When space has been allocated for the movement, the consignor complies with appropriate SOP's concerning the offering of cargo to the transportation movement activity for final coordination with the appropriate aerial port commander and air terminal movement control team.

g. Planning for Movement of Petroleum, Oil, and Lubricants. The TASCOM MCC plans, programs, and monitors the movement of bulk or packaged petroleum, oil, and lubricants (POL) by all military and commercial transport capabilities, except pipeline. Pipeline movements are planned jointly with the supply activity that operates the pipelines to be sure that the most effective use is made of all transport capacity. Planning includes determination of the origin, destination, and mode to be used for transporting the various products. Planning must also determine where facilities will be established to transfer products from one mode to another and where decanting facilities will be established to permit movement of POL as a containerized product. In addition, plans are made for contingency actions to be taken if any transport service is disrupted. Pipeline movements are included in the movement program so that all shippers and receivers are aware of the products they are to receive and the mode by which they will be delivered.

7–4. Determination and Analysis of Movement Capabilities

The MCC determines and analyzes movement capabilities. The capabilities of shipping and receiving agencies and the transport services are the total movement capability. The movement capability of a shipping or a receiving agency is its ability to receive, load or unload, and release transport during a stated period. The amount of labor, quantity and type of shipments to be handled, quantity and variety of materials handling equipment, and facilities of the installation influence this capability. The movement capability of a transport mode is based on its potential lift capability and average turnaround time. The number of operators, status of equipment, and average length of haul affect the potential lift capability. Operators submit their transport capabilities through command channels to the MCC according to published schedules. Because of the above discussed variables, there is a requirement for daily revisions of capability information. The urgent nature of this information makes it necessary that it flow directly from the mode operator to the MCC. This channel is essential if local transportation movements offices are to be capable of carrying out the movements program effectively, whether they use manual or automatic operations.

7–5. Developing Priorities

Movement priorities are established within policy guidelines of the theater commander and, where conflicts arise, are resolved according to his desires. The TASCOM ACofS, movements, provides staff supervision over resolution of conflicting priorities and the carrying out of policy guidelines of the theater commands. Supply and transportation priorities are considered together as a basis for allocating transportation capability and furnishing transportation service when requirements exceed capabilities. Priorities may also be assigned in terms of a type of transportation service; for example, the most expeditious mode that can accommodate the cargo regardless of cost. The MCC implements priorities.

7–6. Selecting and Allocating Transportation Modes

a. After priorities have been established, the next step in preparing the movement program is to select the mode of transportation for each movement. Service is furnished according to the need, which is determined by the established priority, the required delivery date, and the kind of shipment. The skill and judgment of the movement programer are vital in allocating modes to individual shipments. He should be experienced in the field of traffic management, have a well-rounded knowledge of the operations of the several modes of transportation, be able to evaluate capabilities and limitations of the modes to perform specific movements, have a working knowledge of how to load and unload

transportation equipment, know how to evaluate the capacity of installations to ship and receive, and know how to make recommendations to increase the movement capability and to insure that the transportation system is fluid and flexible and that maximum use is made of carrying capacity.

b. In the application of the principles of movement management to the selection of transport modes, the following guidelines apply:

(1) *The most economical mode for the complete movement will be used, consonant with the mission of the command; otherwise, that mode's available capability will be used as far forward as possible.* The best mode to use is the one that can make the complete movement or can get the cargo nearest to destination in one haul with the greatest speed and efficiency and at the lowest cost.

(2) *Rehandling of cargo will be minimized or eliminated, whenever possible.* It is more efficient to transport cargo all the way to destination in one haul than to transfer it in transit. Cargo will arrive at its destination quicker, in better condition, and with less chance of getting lost if not unloaded and reloaded in transit. In addition, cargo handling operations are costly and time consuming and transfer points are targets for enemy action. Mode combination services, such as trailer-on-flatcar, effectively accomplish this objective.

(3) *Backhauls and crosshauls will be avoided whenever possible.* It is impossible to completely eliminate backhauls and crosshauls in a theater of operations since the tactical situation constantly causes changes in movement requirements, but centralized control and planning can keep them to a minimum.

(4) *All available transport equipment necessary to fulfill known requirements will be allocated.* No transport equipment should be reserved for unforeseen requirements. Requirements are met as they occur by allocating transportation according to the commander's priorities. By careful planning, returning vehicles should be used and excess transportation equipment should be immediately relocated.

c. A mode selection guide is shown in table 7–1. This guide shows the modes of transportation in order of economy, and gives each mode's most effective use, capabilities, and limitations.

7–7. Programing by Schematics

Schematics may be used in programing shipments, whether manually or by computer. The purpose of a schematic is to graphically portray total shipping requirements and available transport capabilities as they relate to the actual distribution system. One schematic is prepared for requirements, and a separate schematic is prepared for each transport mode (figs 7–4 and 7–5).

Table 7–1. Mode Selection Guide

Order of economy	*Most effectively used as*	*Capabilities*	*Limitations*
Pack animals and human bearers.	A supplementary mode to extend surface transportation net over terrain impassable to other modes.	All tactical terrain; all-weather. *Pack animals:* For commodity restrictions, can transport approximately 250 pounds with a cargo density of more than 25 pounds per cubic foot. *Human bearer:* Can transport approximately 80 pounds subject to pack configuration.	Most inefficient means when terrain is trafficable to other surface modes. Human bearers most wasteful of human resources.
Pipeline	Primary mode for bulk liquids and solids suspended in liquid.	All-weather, few terrain restrictions; most economical and reliable mode for bulk liquids; relatively few personnel required for operation and maintenance.	Flexibility limited by immobile facilities; vulnerable to sabotage and enemy action; large construction tonnages required.
Water	Primary over-ocean mode. Supplementary inland surface mode for movement of large quantities of cargo in bulk and outsize materiel.	All-weather; any commodity; most economical overall long-distance carrier; particularly useful for relieving other modes for more suitable employment.	Relatively slow; flexibility limited by adequacy of terminals, waterways, facilities, and channels; vulnerable to enemy action and difficult to restore.
Rail	Primary inland mode for maintaining a sustained flow of	All-weather; any commodity; most economical continuous	Flexibility limited by fixed routes, rail line clearances re-

Table 7–1. Mode Selection Guide—Continued

Order of economy	*Most effectively used as*	*Capabilities*	*Limitations*
	large quantities of traffic over long distances.	line haul operation; greatest sustained ton-mile capability; a variety of specialized equipment and services.	strict outsize movements; capability limited by availability of motive power; rail line highly vulnerable to enemy action.
Motor transport -------	Supplementary mode for providing the connecting link which makes possible an integrated transportation system. It can also be employed effectively in scheduled line haul operations by the trailer relay system. Primary mode for distribution operations and for logistical support operations in the combat zone.	Most flexible mode over trafficable terrain; practically all-weather (terrain factor important); increases flexibility of other modes; can transport nearly any commodity with a variety of specialized equipment for both on- and off-road movement.	Over-the-road operations affected by route interferences and by obstacles created by weather, terrain, or enemy action; sustained line haul operations over long distances uneconomical in terms of ton-mile output versus expenditure of manpower and equipment.
Air ----------	Complementary mode for providing expedited movement of mission-essential traffic. Primary or major supplementary mode when terrain reduces effectiveness of surface modes. Scheduled operation is the most economical method of employment and produces greatest sustained ton-mile capability.	Greatest potential speed of delivery and most flexible with respect to terrain obstacles. When these factors are combined with substantial lift capability, air transport over long distances becomes more economically favorable.	Operational capabilities and effectiveness limited by climatological factors and trafficability of takeoff and landing areas. Relatively high ton-mile operating costs.

a. The first step is to develop the requirements schematic. A supply distribution net diagram is prepared showing the relative position of all origin and destination areas as obtained from the movement requirement forecasts. These are shown encircled in figure 7–4. Then a listing of daily shipping requirements for each origin-destination area combination is prepared showing the class of supply, tonnage, and the movement program line number. If forecasts are expressed as total program period tonnages, daily average requirements are obtained by dividing the total tonnage by the number of days in the program period. The list of each origin-destination combination is posted in an appropriate position between origin and destination.

b. The second step is to prepare a transportation net diagram for each available mode. Mode capability data are expressed in several forms: for rail and air, as total daily tonnage capacity between major terminals; for motor transport, as the daily ton-kilometer capacity in a particular area, or by segments of a line haul in relay-type operations; and for pipelines, as the number of gallons throughput daily. Figure 7–5 shows a rail schematic and how shipments are allocated to rail. Origins and destinations are shown encircled and mode capability information is shown in tons.

c. Using the requirements schematic, the final step is to select and allocate a mode for each shipping requirement (line item). First consideration is given to allocating capability for the largest requirements moving the longest distances and evaluating movement priorities and shipment characteristics. Primary emphasis is placed on using the full capability of each mode in the relative order of economy. As each movement requirement is assigned to a mode, that requirement is added to the applicable origin-destination combination list on the mode schematic. At the same time, an appropriate deduction is made from that mode's capability. Linearprograming procedures for manually developing the mode capability/usage data for the schematic are described and illustrated in appendix F. When all movement requirements have been assigned, the mode allocation information is transferred to the movement program. The schematics are posted in a conspicuous place during the applicable program period as a means of recording changes and for illustrating the effect of changes on the transportation system as a whole.

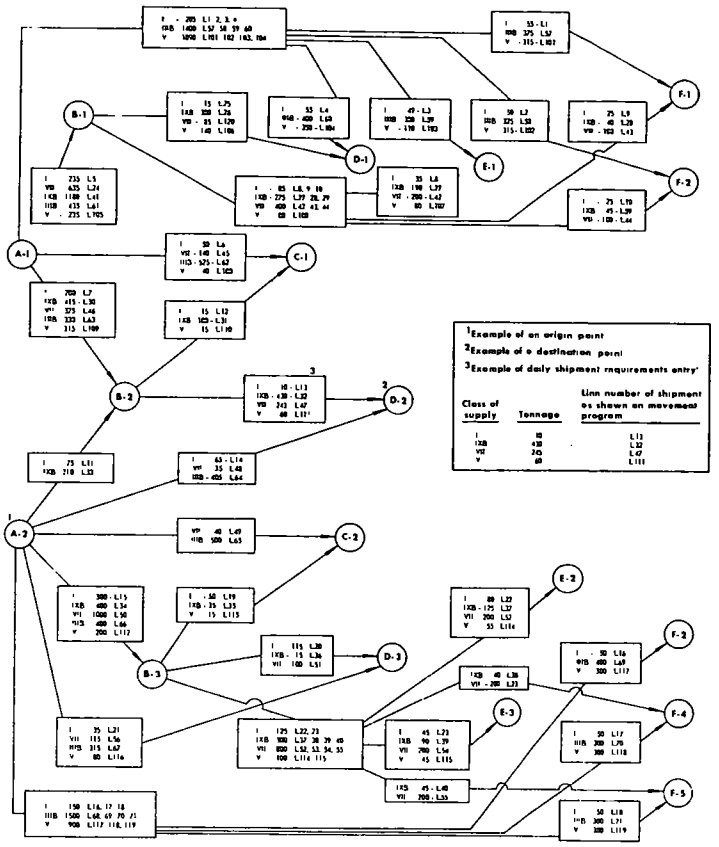


Figure 7–4. Requirements schematic.

7–8. Finalizing the Movement Program

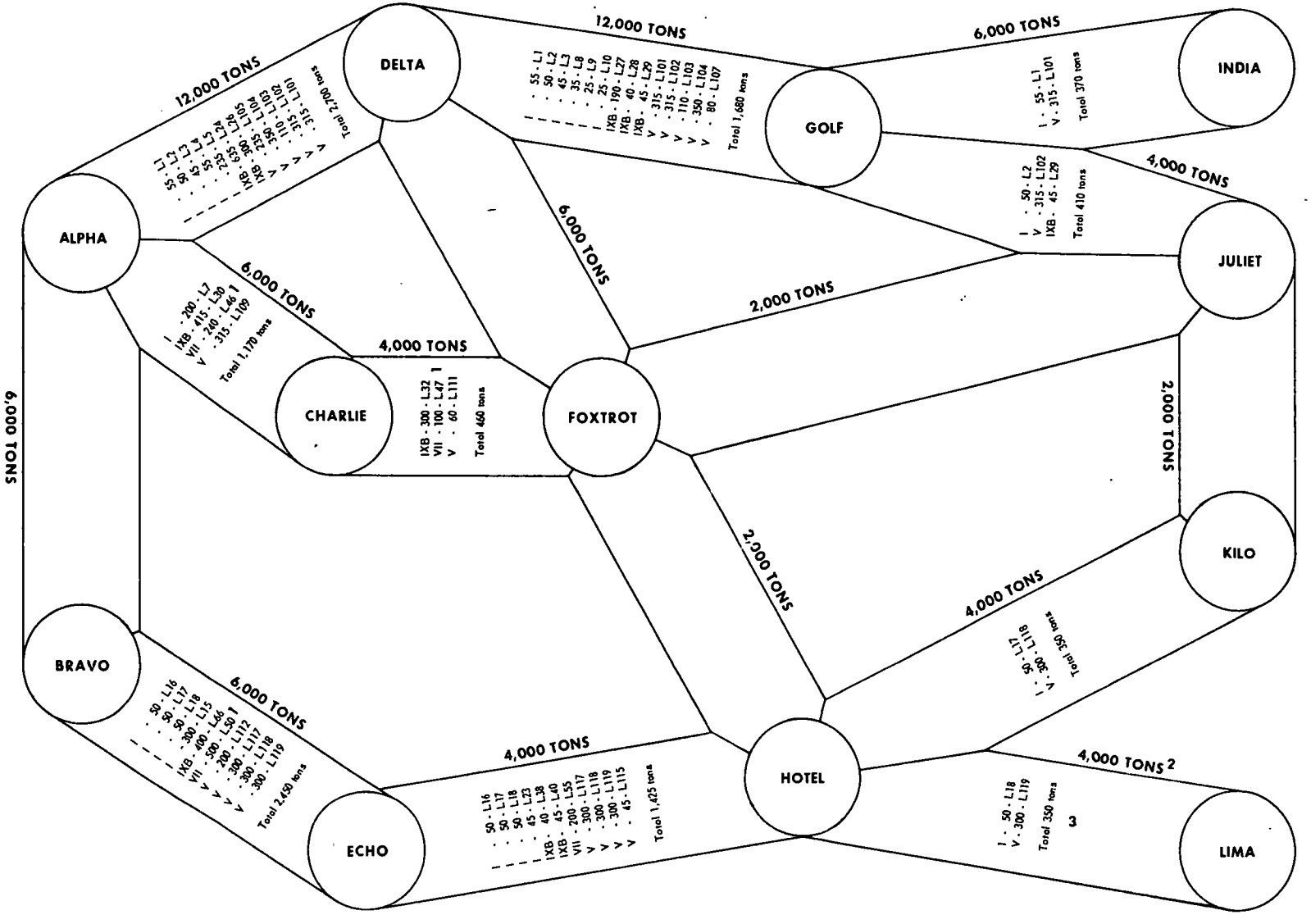
a. The MCC now has all the information needed to compile the movement program in the basic format shown in table 7–2. When the movement plan is coordinated with and approved by the theater commander, it becomes the movement program and allocates transport capability to accomplish known movement requirements according to established shipping priorities. It provides for both forward and retrograde supply and personnel movements. Further, it reflects the transportation capability of not only those modes of transportation organic to TASCOM, but also other space specifically allocated to it, such as space from the Military Airlift Command, the tactical airlift force, and local transportation systems. Published and distributed by the MCC to shippers, consignees, TMO's, mode operators, and transportation facilities, it is the command directive to carry out the movements that it lists. It serves as the authority by which shipping activities may initiate action to obtain transportation; [2] it authorizes the TMO to issue movement releases; it directs the transport services to furnish the requisite capabilities; and it alerts receiving agencies to accept programed shipments and to unload carrier equipment promptly.

b. Table 7–2 is an extract of a movement program prepared for the Military Assistance Command, Vietnam. Note that it gives the identifying line number, origin, destination, short tons, number of passengers, and the class of supply for each shipment. The alphabetical code preceding each line number gives the name of the shipper and the mode of transport to be used. The W indicates the US Army, Vietnam, and the A that the shipment will be made by air; the last three digits indicate the line entry number. Origins and destinations are likewise shown by codes; for example, origin BAE is Bac Lieu, and destination VCA is Can Tho.

7–9. Coordination of Movement Programs

Installations in forward areas receive shipments by TASCOM interzonal transportation, FASCOM armywide transportation, and corps

[2] Note that programed shipments are not moved automatically. Shipping agencies must request the transportation specified for each shipment according to an established lead time that provides sufficient advance notice to set up the type and amount of transportation that each operation requires. In addition, each shipment must have a transportation movement release as discussed in paragraph 7–14.



[1] Balance of line by driveaway.

[2] Total daily tonnage capability between major terminals.

[3] Movement requirement by line number, tonnage, and class of supply.

Figure 7–5. Mode schematic.

support brigade transportation. It is therefore essential that all movements be closely coordinated and that movement information be promptly transmitted so that the capabilities of receiving installations to unload are not exceeded. In view of the volume of throughput distribution, it follows that the TASCOM movement program is the primary program and that the FASCOM planning is based largely on knowledge derived from the TASCOM program as to volume, commodities, and destination in the field army area.

Table 7-2. Extract of Movement Program from the Military Assistance Command, Vietnam

Line No.	Origin	Destination	Short tons	Passengers	Cargo class
WA001	BAE	VCA	10	15	I through X
WA002	BBH	MULTI	30	30	Do.
WA003	BCL	MULTI	10	60	Do.
WA004	BMV	MULTI	10	300	Do.
WA005	BUNARD	MULTI	15	10	Do.
WA006	CAH	NHA	10	50	Do.
WA007	CAH	SGN	5	375	Do.
WA008	CAH	UAN	20	160	Do.
WA009	CAH	VCA	30	140	Do.
WA010	CAH	VCI	10	130	Do.
WA011	CAH	VCR	5	500	Do.
WA012	CAH	VDH	5	20	Do.
WA013	CAH	MULTI	50	100	Do.
WA014	DAD	DPO	15	150	Do.

a. FASCOM supply resources are located in both the army rear area and the corps support brigade areas. Moving supplies from these resources is planned by FASCOM and, in the case of supplies from the corps support brigade areas, may require the use of corps support brigade motor transport to execute the movement.

b. Within the field army, the MCC has knowledge of supplies and materiel that are moving forward from TASCOM. If a transfer in carriers is necessary (for example, between rail and truck), the FASCOM MCC, in coordination with the TASCOM MCC, determines which cargo will be throughput on communications zone transportation and which will be transferred to field army (FASCOM) transportation. When the decision is made, the FASCOM MCC provides the requirements information to the appropriate modes, the transfer point activity, and the appropriate TMO's.

c. The corps support brigade program is a derivative of the FASCOM program. Support brigade transportation will be primarily concerned with transporting POL, ammunition, and repair parts whose required delivery date precludes shipment from army rear or TASCOM depots.

7-10. Nonprogramed Movements

a. In the corps support brigade and FASCOM (and to a lesser extent in TASCOM), there are normally a significant number of nonprogramed actions which the TMO is required to coordinate. These result primarily from the fact that it is not feasible to program all shipments from direct support units.

(1) The support brigade normally has a portion of its motor transport capability allocated to support of direct support personnel and supply actions and to essential rewarehousing actions within the support groups' storage facilities.

(2) The support brigades may be allocated a portion of the FASCOM transportation brigade air transport capability for making nonprogramed movements from direct support activities to supported units. When so allocated, the support brigade MCC normally retains allotment authority, and places requirements with the aviation battalion to which the operating aviation companies are assigned. On nonprogramed airlifts, operating coordination is accomplished between the local TMO and the aviation company.

(3) The area support groups in TASCOM are provided with motor transport units to accomplish direct support transportation missions, but not for rewarehousing operations within the TASCOM depots. However, when the assigned transportation is insufficient to meet the area support groups' requirements (or when another mode of transport is required), the requirement is placed on the local TMO as a nonprogramed action.

b. Requirements for inclusion in a movement program are forecast well in advance of the actual movement. During this period, shippers may have requirements that must move before the next program is compiled. If the requirements are transmitted by the materiel management center directly to the MCC, the MCC clears the requirements through the programing office. This permits the requirements to be placed in their relative position in the movement program and thus maintain the benefits that result from movement planning. If an activity other than the materiel management center enters the movement requirement into the system, transportation movement release procedures are followed, as discussed in paragraph 7–14.

7–11. Variations from the Movement Program

a. Although the movement program is based on estimates of shipping requirements and movement capabilities, a high degree of accuracy is required for each period of the program. If it develops that the necessary degree of accuracy is not being attained, it may be necessary to make some adjustments within the program. The theater commander, through the TASCOM commander, establishes guidelines within which variations from the published program may be made. To illustrate the type of question covered by such guidelines, consider a programed movement of 100 tons of class I supply that is to move daily from point Y to Point Z, during a stated period of time:

(1) Must exactly 100 tons be shipped each day?

(2) Can 150 tons move one day and 50 tons the next?

(3) Can 50 tons of class I and 50 tons of class II move each day?

b. When movement personnel must make decisions concerning variations within the movement program, they must do so only within the commander's guidance. Any variations allowed by movements personnel must be—

(1) Kept within the scope of established guidelines.

(2) In consonance with sound movement principles.

(3) Based on a knowledge of the overall situation (to include the shipper, the consignee, and the mode operator(s)) and the probable effect of the variation.

c. By virtue of their location and involvement in the movement planning process, movement personnel are in a position to identify problem areas and to collect data to aid the commander in making a decision concerning proposed variations that are outside the established guidelines.

7–12. Consolidation and Distribution of Small-Lot Shipments

The movement of small-lot shipments is always a significant transportation problem in a theater of operations. Military standard requisitioning and issue procedures (MILSTRIP) tend to generate numerous small shipments, particularly in classes II, IV, VII, and IX. To promote more effective movement management, these shipments must make maximum use of available movement capability. To do this, the shipper may handle less-than-release-unit shipments by one of several methods:

a. Consolidate them into a release-unit quantity, thereby making them eligible for a transportation movement release.

b. Move them by organic transportation.

c. Hold them for pickup service provided in connection with a less-than-carload scheduled express operation.

d. Forward them to the nearest consolidation and distribution (C&D) point (if available) for consolidation and onward movement.

(1) The C&D point brings together for movement in one vehicle (or a series of vehicles) shipments of one class of supply or shipments en route to a common destination or a common terminal point along the route used by the transport service. By consolidating relatively small movements to form vehicle (air, highway, rail) loads, movement of partially loaded vehicles is reduced to a minimum and maximum use is made of available movement capacity within certain limitations.

(2) Freight C&D points are manned and operated by C&D point detachments organized under TOE 55–560, and function under the supervision of an activity designated by the commander who has control in the area where the C&D point is located.

(3) The shipping activity advises the C&D point serving its activity of small-lot shipments, giving the same information that is required for a transportation movement release (para 7–14). Then, when authorized by the C&D point, the shipping activity forwards the shipments (properly documented) by organic transportation to

the C&D point.[3] After consolidating the shipments into release-unit quantities, the C&D point requests the TMO serving the area to provide transportation and to secure a transportation movement release from the consignor TMO. If transportation is not locally available to the TMO, he goes to the regional TMO with the request. Normally, the regional TMO can make transportation available for these relatively small movements but, if it cannot do so, it forwards the request to the MCC. As with all movements, when the shipment is made, the consignor forwards a report of shipment to the consignee.

7–13. Request for Transportation

a. The request for transportation, which may be written or telephonic, is prepared by the installation transportation officer for the consignor and submitted to the local TMO at least 48 hours in advance of the desired date of movement (number of hours may vary, dependent on local standing operating procedure and the immediate situation). The request must contain sufficient information to enable the transportation movement organization to determine the most suitable means of transport and the actual transport available (in the case of a nonprogramed movement) and to enable the mode operator to plan his operation for carrying out the movement. The MCC will specify what information is required in the request. Normally, however, it will include the following information:

(1) Reference to the movement program line number (if a programed movement).

(2) Shipping and receiving unit designator codes and location by name and map coordinates.

(3) Desired mode of transport.

(4) Date of start of loading operation and of arrival at destination.

(5) Description of cargo to be moved in terms of class of supply and estimated short tons and measurement tons.

(6) In the case of personnel, a description of the kind to be moved (medical evacuees, troops, prisoners of war, civilians).

(7) Special precautions or requirements for special handling (heavy lifts should be expressed in units, dimensions, and short tons of each lift; items requiring controlled temperatures or environment must be identified).

b. For *programed shipments*, the TMO coordinates the request for transportation with the mode operator, actually placing the demand for transportation equipment upon him. As previously noted, although programed movements have had the mode allocated by the movement program, the program is not self-implementing. The movement program, although a command directive, is simply a reservation of space for forecasted movements and enables the planners, coordinators, and operators to plan ahead for the overall use of transportation. Upon receipt of a request for transportation, the origin TMO confirms with the mode operator that the transport capability is available and adequate. The origin TMO then forwards the request for transportation to the destination TMO who, in turn, confirms that the consignee has the receiving capability. The destination TMO then issues a transportation movement release (para 7–14) which he forwards to the origin TMO. These actions must be accomplished expeditiously. If communications should fail, the origin TMO may issue the transportation movement release, based upon his knowledge of receiving capability. He must then, as soon as possible, advise the destination TMO of the action taken. The origin TMO then informs the shipper so that he may make preparations for the movement. When the shipment is loaded, the shipper notifies the origin TMO and releases the transport for movement. The carrier also notifies the TMO of the actual time the shipment departed the terminal. Immediately after the shipment moves out, the shipper prepares and sends by fast communication a report of shipment (REPSHIP) to the consignee with information copies to the MCC and the TMO's at origin and destination. (The origin TMO makes sure that a REPSHIP is promptly dispatched.) (Refer to paragraph 6–14 for a discussion of the REPSHIP.) When the consignee has receipted for the shipment, he returns a copy of the receipted TCMD (para 6–4 and app B) directly to the shipper, who compares the receipted copy of the TCMD with his file copy to determine that all items that were shipped arrived at destination.

c. For *nonprogramed shipments*, the TMO serving the shipping installation forwards the requirement first to the regional TMO. Normally, the regional TMO is allocated some transport capability in excess of that provided by the movement program, and he may further allocate this to TMO's for decentralized use in

[3] Small lots of hazardous cargo (for example, explosives, gasoline, acids, and highly flammable or corrosive substances), items which might contaminate other cargo (for example, fertilizers), items which require protection from heat or cold (perishables), livestock, or classified or security cargo requiring continuous guarding are not to be shipped through C&D points.

processing requests for transportation for nonprograméd interzonal movements. At the same time, the regional TMO may allocate a block of transportation movement releases to be used to authorize and identify the shipment (the destination TMO, in cases of this nature, must still indicate the ability of the consignee to receive the shipment). If the regional TMO cannot provide the transport capability, it forwards the request for transportation to the MCC. If the MCC cannot provide the transport capability and the request is of an emergency nature, the request for transportation goes to the TASCOM ACofS, movements (in the case of intrafield army movements, to the FASCOM ACofS, movements), for a determination of priority and the possibility of deferment of a programed movement to permit satisfaction of the emergency movement requirement. (Appropriate installation transportation offices and TMO's are informed of any changes to the movement program resulting from actions of this nature.) Once transportation has been arranged for, the remaining procedures parallel those for programed movements.

7–14. Transportation Movement Release

The transportation movement release (TMR) is the authority for moving a shipment. It authorizes the dispatch of transport equipment, verifies that the consignee is able to accept and handle the shipment, and identifies the specific shipment during its movement. As noted in paragraph 7–13, it is the destination TMO who, after first determining that the consignee is able to accept the shipment, so advises the origin TMO by forwarding the transportation movement release. The TMR identifies the destination TMO, the mode of transport to be used, and the movement priority and delivery date, and notes any special handling requirements. The example shown below illustrates the construction of a TMR:

3K–169–R–3/17 Aug–P/EX

3K–169–	This is the indicator for the destination TMO. It identifies the TMO and his location and the number of the release for shipment by the TMO (these numbers indicate the sequence of shipments released during the current month). In this case, the code represents the 3rd Region, TMO Karlsruhe, 169th release during the current month.
R–	Mode indicator (R—rail; H—highway; A—air; W—water).
3/17 Aug–	Priority 3; required delivery date, 17 August.
P/EX	Perishable/expedite

(P or NP may be added to indicate programed or nonprograméd shipments.)

7–15. Movement Instructions

Although the movement program allocates movement requirements to movement capabilities and reflects command priorities, it does not contain detailed information. For example, it may state that 100 tons of class II supplies will move daily from point A to point B by rail during a specific time period. However, it does not contain instructions, for instance, about the type of cars required, opening and closing times of the activities at points A and B, number of cars that should be spotted during daylight and darkness, and the detailed information needed to make the day-to-day movements at installation level. Therefore, when the movement program is received, the local TMO, in coordination with the shipper and mode operator, issues detailed movement instructions to cover specific information not contained in the movement program and to give details applying to the area or to the particular shipment. A sample movement instruction follows: "Line item 128, movement program 15–21 September, TMR 3K–169–R–3/19 Sep, will be expedited. It will be covered with a tarp to prevent ready identification by casual observation. Loading will be done during daylight. Passing reports will be obtained from LeVas, Ogton, and Dennis. Upon arrival at LeSuyong, the 508th MP Company will provide a guard escort to accompany shipment through the Esplana province. Shipment will be delivered to consignee during daylight hours."

7–16. Movement Actions En Route and at Destination

Once a shipment begins to move, it may be expedited, traced, diverted, reconsigned, stopped or held in transit, or transferred. At destination it must be received and unloaded, and the transport equipment must be released without delay. Movement actions en route and at destination are as follows:

a. Expediting. Expediting should begin before a shipment is actually moved so that it can be packed, marked, loaded, and routed to take advantage of the fastest transportation schedules. The REPSHIP should contain sufficient identification so that each TMO along the line can assure that the shipment is not unnecessarily delayed. Since an expedited shipment is a disruption of the normal movement of supplies, all requests that TMO's receive for expediting shipments are processed through the materiel management center and MCC channels to eliminate abuse of this service.

b. Tracing. To have a shipment traced, the consignee submits a MILSTAMP tracer to his servicing TMO, citing the transportation control number to identify the shipment in question. Note at this point that, before the destination TMO initiates tracer action, he must be sure that the required delivery date has passed and that the shipment is in transportation channels. After confirming these two factors, the destination TMO checks with the mode operator who should have last handled the shipment and requests the status of the shipment. If that activity has no record of the shipment, the TMO checks with the next carrier, and so on back to the origin point of the shipment if necessary. The point where the tracer and the shipment actually meet must furnish the destination TMO with new information concerning the estimated time of arrival at destination and the causes for delay.

c. Transit Servicing. Transit actions such as stopping in transit, holding, diverting, and reconsigning by agencies unfamiliar with the transportation situation can create congestion and confusion and waste movement capability. All requests for these actions are made through the TMO, who in turn notifies the MCC, either by conventional communications or by computer. The MCC, with its access to the computer and by properly coordinating activities with all concerned, assures a free flow of movements to destination. Transportation movement officers monitor the traffic moving over the system and do not physically divert shipments. The transport modes divert shipments and complete the necessary documents.

d. Transferring. Normally, terminal transfer units operate transfer points—places between origin and destination where traffic is transferred from one mode of transport to another. For example, terminal transfer units of the TASCOM transportation command may be employed in the field army area to transfer cargo from rail to TASCOM trucks in connection with TASCOM's responsibility to deliver cargo to the direct support units in the corps support brigades. Transportation movement officers at these points coordinate with the modes. When a consignor ships through a transfer point, the movement program so designates and a REPSHIP is forwarded to the point. Upon receipt of the REPSHIP, the transfer point prepares for receiving and shipping. It prepares another request for transportation and, upon departure of the shipment from the transfer point, forwards a REPSHIP to the consignee.

e. Receiving, Unloading, and Releasing Transport Equipment. The TMO at destination coordinates with consigness and transport modes in preparing to receive shipments and deciding where equipment is to be spotted for unloading. The unloaded transport equipment may be used for retrograde shipments or released to the transport service. If it is controlled equipment (for example, containers), disposition is made according to MCC instructions.

Section II. HIGHWAY REGULATION

7-17. General

The basic tool of the commander for accomplishing highway regulation is the highway traffic headquarters and its subordinate highway regulating point teams in the field. These units are described in chapters 2 to 5. The extent of regulation exercised by a traffic headquarters depends on the amount of movement expected and the capacity of the road network. Types of movements normally scheduled by traffic headquarters include convoys, oversize or overweight vehicles, vehicles moving by infiltration, and troop movements on foot.

7-18. Terminology

Terms commonly used in highway regulation are defined in the glossary to this manual.

7-19. Planning for Highway Regulation

Before a highway traffic headquarters can begin its traffic regulating activities, it must prepare a highway regulation plan for the road net of its area. The highway regulation plan which is prepared by the highway traffic headquarters, is a staff plan, which may be oral or written, concerning the capabilities of the existing road net to handle the traffic that must move over it. It is started well in advance of actual operations and is developed in consonance with the size of the command, the road network, the logistical situation, and the mission, composition, and disposition of tactical units. Planning is fully coordinated with other staff agencies and among all echelons of commands concerned.

a. Basis for Planning. Highway regulation planning is based upon—

(1) Information on operational plans for the command (including civil officer's plans); policies, priorities, and restrictions imposed by higher headquarters; and plans for logistical

support of the command.

(2) General route information—surface or pavement type, alinement, surface and width of shoulders, location and characteristics of bypasses or detours around limiting physical features and potential hazards, highway network distances, driving times, and highway capabilities. Alternate routes are considered, as well as critical points along all routes where ambush or other enemy action might be encountered.

(3) Traffic information—traffic density and anticipated volume by vehicle type, variations in the traffic flow over sections of routes during specific periods, the need of traffic patrols, and the location of sensitive areas such as potential bottlenecks, intersections requiring control, or railroad crossings requiring guards.

(4) Terminals and other facilities—location and characteristics of supply points, depots, service stations, tractor-trailer relay points, turnarounds, offroad parking areas, bivouac areas, and evacuation or hospital facilities—all considered in terms of access from major routes and capabilities for receiving, loading, unloading, and providing maintenance and service for motor transport.

(5) Availability of communications equipment.

b. Sources of Planning Information. Information required for planning is derived essentially from the following sources:

(1) The assigned mission, which may be a separate logistic mission or an extension of the tactical mission.

(2) Current estimates, the administrative order, and administrative plan(s).

(3) Reconnaissance as thorough as the situation and time permit. Preliminary information on the road network is generally obtained from maps, aerial photographs, local traffic authorities, intelligence reports, and transportation intelligence studies. This information is verified and supplemented by ground reconnaissance and, when practicable, by aerial reconnaissance. Ground reconnaissance parties may be composed of engineer and/or transportation personnel. The route reconnaissance overlay, furnished by the engineer officer, provides detailed information on the characteristics of the road net. (For an example of an overlay, see FM 5–36.)

c. Traffic Circulation Plan. The traffic circulation plan (figs 7–6 and 7–7) graphically portrays the road net plan and how it is to be used and maintained. Normally prepared in the form of an overlay, it provides highway regulation information to the highway users. Normally, the traffic circulation plan includes the following information:

(1) The most restrictive route features and route designations.

(2) Direction of movement.

(3) Location of boundaries, units, highway regulating points (HRP's), traffic control points, and principal supply points and depots.

(4) Major geographic features and light lines, if applicable.

7–20. Management of the Plan

Management is a joint function of the highway traffic headquarters and its field offices (highway regulating points) and includes all measures taken to assure that the highway regulation plan is carried out effectively. The transmission of instructions to commanders and the distribution of pertinent information to control personnel can be simplified by publishing certain routine instructions as standing operating procedures. Such items include, but are not necessarily limited to—

a. Rate of march and maximum permissible speed.

b. Frequency and duration of halts.

c. March discipline.

d. Special rules of the road.

e. Methods for handling stragglers and disabled vehicles.

f. Procedures for obtaining road clearance or movement credits.

g. Reports and reporting procedures.

h. Gaps between vehicles and between serials.

i. Controls required; for example, use of guides, flags, and markings.

j. Identification of highway regulating and traffic control personnel by armbands or other means (STANAG 2159, app R).

7–21. Traffic Routing

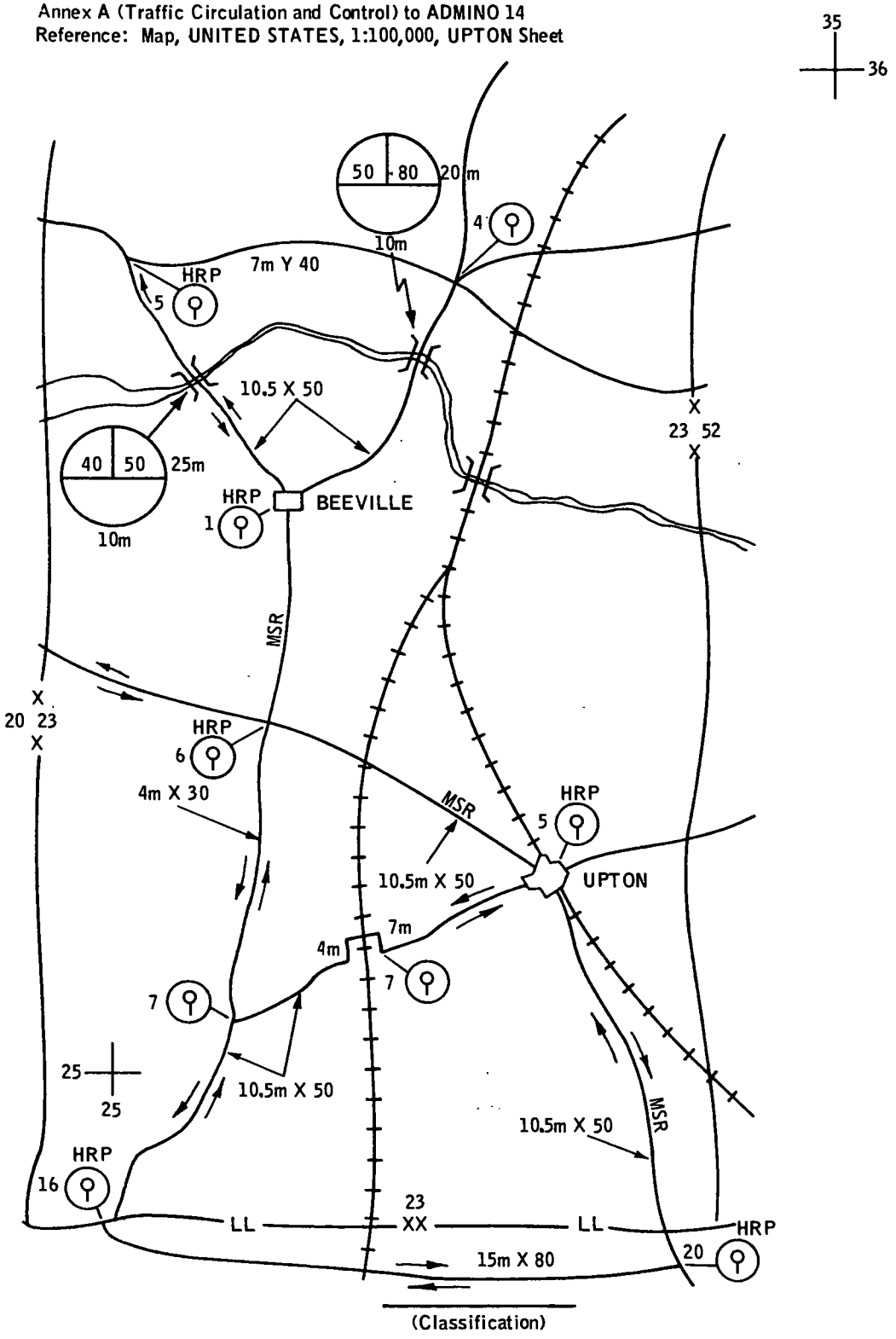
a. Traffic routing is the planning of highway movement over designated routes. Three fundamentals govern routing: balance, separation, and distribution.

(1) *Balance* is the matching of vehicle characteristics with characteristics and limitations of available routes; for example, routing heavy, cumbersome, or outsize equipment over a route with grades and curves within the capabilities of the equipment and with bridges of adequate capacity and width.

(Classification)

BEEVILLE (RH2835),
UNITED STATES
151200 Aug 19___
MH 41

Annex A (Traffic Circulation and Control) to ADMINO 14
Reference: Map, UNITED STATES, 1:100,000, UPTON Sheet



(Classification)

Figure 7–6. Sample traffic circulation plan, army area.

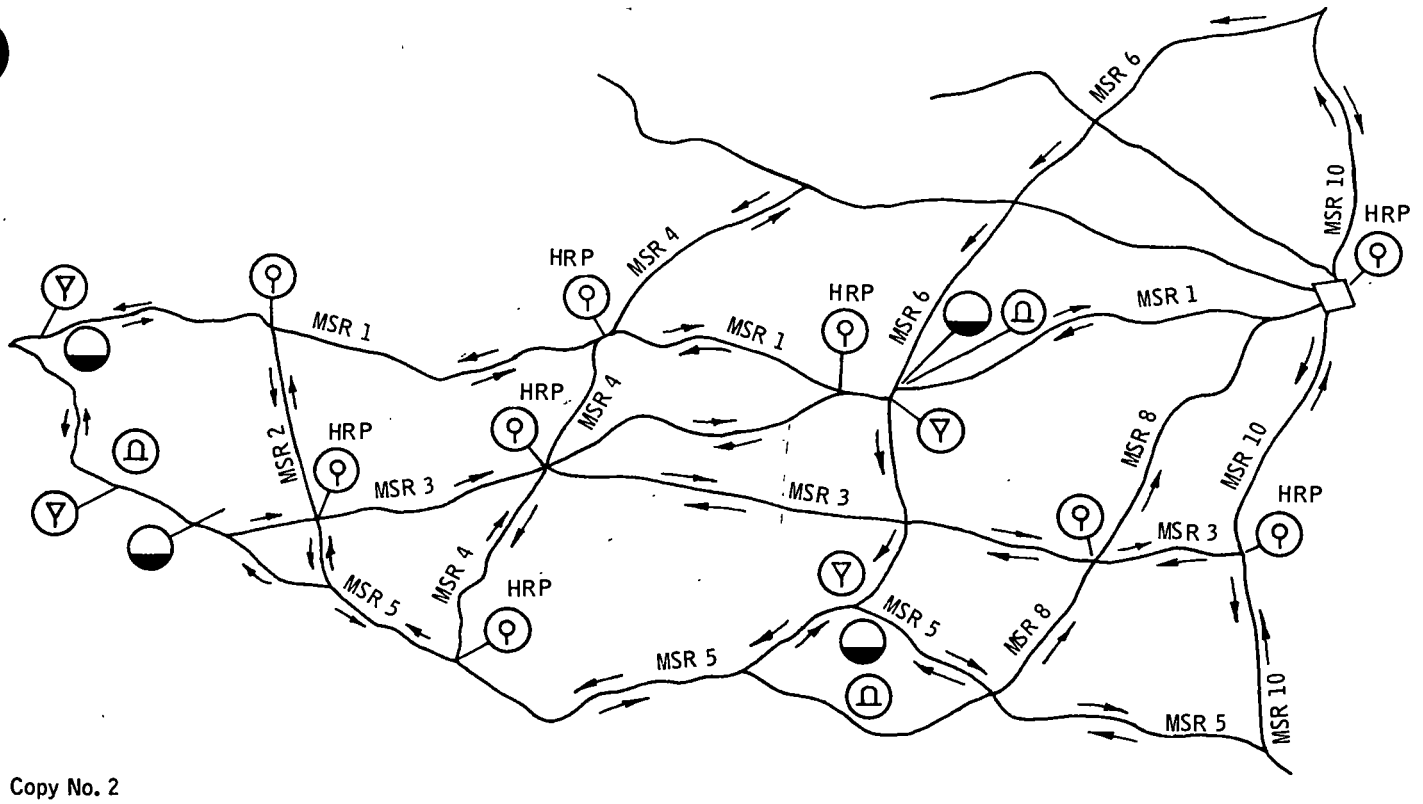


Figure 7–7. Sample traffic circulation plan, TASCOM area.

(2) *Separation* is the allocation of nonconflicting routes to concurrent movements. For example, separate lanes may be provided for slow and fast traffic, or one road provided for forward traffic and another for return.

(3) *Distribution* is the allocation of as many routes as possible for the movement of traffic to reduce traffic conflict, to prevent deterioration of road surfaces from the concentration of heavy traffic, to effect vehicle dispersion, and to decrease the time required to complete the movement.

b. The following principles govern traffic routing:

(1) Route traffic from its origin by way of predetermined intermediate locations to destination.

(2) Assign highest priority traffic to routes that provide the minimum time distance.

(3) Consider the capabilities of roads and bridges for sustained operations when assigning movements to routes.

(4) Separate motor movements from foot and animal movements and slow motor movements from fast ones by assigning different times for each in accordance with their respective march capabilities. When necessary, arrange for assignment of civilian traffic to separate routes to assure freedom of movement for essential military traffic.

7–22. Traffic Scheduling

a. Traffic scheduling is the coordination of times for road movements along routes. Scheduling is necessary in order to—

(1) Give priority to units in accordance with the commander's directives and, when scheduling the movement of several units, to units moving to more distant positions.

(2) Minimize delays, conflicts, and congestion by assuring that traffic flow never exceeds the capacity of the most limiting feature (most severe bottleneck) of the route and by reducing peak traffic by spreading the flow.

(3) Provide detailed regulation of special or high-priority individual movements.

(4) When air superiority is not established, promote security and passive defense by scheduling movements during hours of darkness.

(5) Restrict traffic to road capabilities to permit necessary highway maintenance.

(6) Maintain cognizance of all convoys so that at any time they can be rerouted, diverted, used to meet emergencies, or held to permit passage of priority movements.

b. In planning a large-scale road movement, many of the schedule computations become complicated and repetitious. These computations can be simplified by—

(1) Preparation and use of conversion tables for changing US common to metric distances (table 7–3), number of vehicles to time length, and distance to time.

(2) Standardizing as many variables as possible. For example, if all wheeled vehicles not overweight or oversize can be diverted to use the same rate of march on a certain class of road, scheduling is simplified and the route is used more efficiently.

c. Road movements may be scheduled by the methods discussed in (1) through (4) below:

(1) *Infiltration schedule.* An infiltration schedule is a vehicle dispatch rate assigned to a unit for a specified period. Vehicles or small groups of vehicles after dispatch proceed independently to their destinations over a prescribed route. By assigning appropriate rates of dispatch to different units using the same route, average traffic flow is held within desired limits. For example, two vehicles may be dispatched every 5 minutes the first hour and every 10 minutes the second hour.

Table 7–3. Metric Conversion Table

Kilometers to miles (km × .62 = mi)		*Miles to kilometers (mi × 1.609 = km)*	
1 =	.62	1 =	1.609
2 =	1.24	2 =	3.218
3 =	1.86	3 =	4.827
4 =	2.48	4 =	6.436
5 =	3.10	5 =	8.045
6 =	3.72	6 =	9.654
7 =	4.34	7 =	11.263
8 =	4.96	8 =	12.872
9 =	5.58	9 =	14.481
10 =	6.20	10 =	16.090
20 =	12.40	20 =	32.180
30 =	18.60	30 =	48.270
50 =	31.00	40 =	64.360
75 =	46.50	50 =	80.450
100 =	62.00	75 =	120.675
		100 =	160.900

(2) *Location schedule.* A location schedule minimizes congestion and prevents clogging of the traffic stream by assigning nonconflicting times for arrival and departure to different units at a particular location. The location may be a city boundary, detour, intersection, or other critical point. A location schedule may also be applied by assigning specific times for movement in one direction; for example, at a particular intersection, unit A may be scheduled to arrive at 1000 hours and to clear at 1015, unit B to arrive at 1020 and to clear at 1030, etc. Or northbound movements might be scheduled to proceed through a defile every even hour and southbound movements, every odd hour. Location scheduling may be simplified and graphically portrayed by use of the critical time and point graph (discussed in detail in para 7–34).

(3) *Column schedule.* The column schedule indicates the arrival and clearance times for individual movements at specific points along a prescribed route of march. This schedule is used for the movement and is an aid to the unit commander in exercising unit control. Movement instructions often take the form of march graphs or road movement tables approved by the appropriate traffic headquarters.

(4) *Route schedule.* The route schedule is used to apportion time to individual movements proceeding along or intersection given routes. Certain routes may be designated as controlled routes, and a march graph may be prepared for each. The routes selected may be main supply routes, routes that will carry the greatest volume of traffic as indicated by traffic analysis, or routes selected on the basis of need for coordination. For example, in planning for a special operation, the routes described in all proposed itineraries submitted for approval for movement on a given day may be plotted on a single overlay. The route(s) over which the greatest number of convoys move should then be selected as the dispatch route(s). This method graphically portrays the progress of each convoy (for example, a change in the rate of march is readily apparent). The route schedule is limited in scope as, by itself, it provides no control over movements to and from the dispatch route.

d. The following basic principles are applicable in all scheduling of highway movements:

(1) Intraarea movements are scheduled and a movement number is assigned to the unit by the highway traffic headquarters of the command having area jurisdiction.

(2) Interarea movements are coordinated between areas concerned. The traffic headquarters in the area where the movement originates

assigns the movement number. When interarea movements conflict and cannot be resolved by the highway traffic headquarters concerned, the commander having overall jurisdiction is advised through the appropriate general staff section and is requested to determine the priority of movements.

(3) A round trip scheduled for completion within 24 hours is treated as a single movement. When more than 24 hours are required to complete a round trip, the return trip may be treated as a separate movement requiring a new movement number.

(4) A movement in one direction only, regardless of the number of days involved, is treated as a single movement and retains the same movement number to destination.

(5) March units within a column may be identified by adding a letter behind the movement number.

(6) Approved schedules and assigned movement numbers are furnished the provost marshal so that he may provide necessary traffic control within his capabilities.

7–23. Unit Request for Convoy Clearance

Before beginning a road movement over a route requiring a movement credit, the unit submits a request for clearance on DD Form 1265 through movement channels to the highway traffic headquarters within whose area the movement originates. DD Form 1265 (Request for Convoy Clearance) is a dual purpose document serving as either a request or an authorization for movement, or both. It is used by the requesting agency desiring to initiate a movement via highway and by the highway traffic headquarters to grant clearance and to issue instructions for the road movement. Information to complete this form is supplied by the unit requesting the movement. Depending on the urgency of the requirement, the information contained in the form may be transmitted orally, electrically, or in writing. In North Atlantic Treaty Organization operations, the unit request for highway movement must be in consonance with part I of appendix B to STANAG 2155 (app O).

7–24. Highway Traffic Headquarters and the Movement Credit

a. After receiving the request, the highway traffic headquarters, if possible, schedules the movement at the time and over the route requested by the unit. When the move cannot be scheduled at the requested time or on the requested route, the requester is immediately notified and an alternate time and/or route(s) are arranged.

b. After final coordination and approval, the highway traffic headquarters issues the necessary movement credit and movement number for the convoy, plus any additional required information. This authorization is returned to a requesting agency through the same channels used in the request.

c. In NATO operations, the granting of movement credits is governed by part II of appendix B to STANAG 2155 (app O).

7–25. Highway Traffic Priorities

Priorities are issued on the basis of urgency or critical need (app D). Generally, when conflicts occur between movements having the same priority, forward-moving traffic has priority over traffic moving to the rear, and forward-moving loaded vehicles have priority over empty vehicles moving in any direction. Priorities are established on the basis of the commander's requirements to meet the military situation and can be expected to change from time to time.

7–26. Time-Distance Relationship in Highway Planning

A primary task of the highway movement planner is to plan for the arrival of a highway movement at a certain point at a scheduled time. To do this, the planner must know how far a convoy is to travel (distance) and how long it will take to make the trip (time). Subparagraphs *a* and *b* below discuss distance factors and their corresponding time factors. The factors are illustrated in figure 7–8.

a. Distance Factors. Distances are expressed in kilometers or meters. A convoy may be several kilometers long, and each vehicle may have several meters between it and the next vehicle in the column. The terms used to describe these distances follow.

(1) *Length* of any convoy or subgroup of it is the length of roadway which it occupies, measured from the front bumper of the first vehicle to the rear bumper of the last.

(2) *Road space* is the length of roadway occupied by a convoy or a subgroup thereof and any space added to the length that may be required for safety or to maintain flexibility. In other words, it is the sum of the lengths of the vehicles, the gaps between vehicles, the gaps between the march elements, and the space allowed on the road to avoid conflict with following traffic. For example, a convoy of three seri-

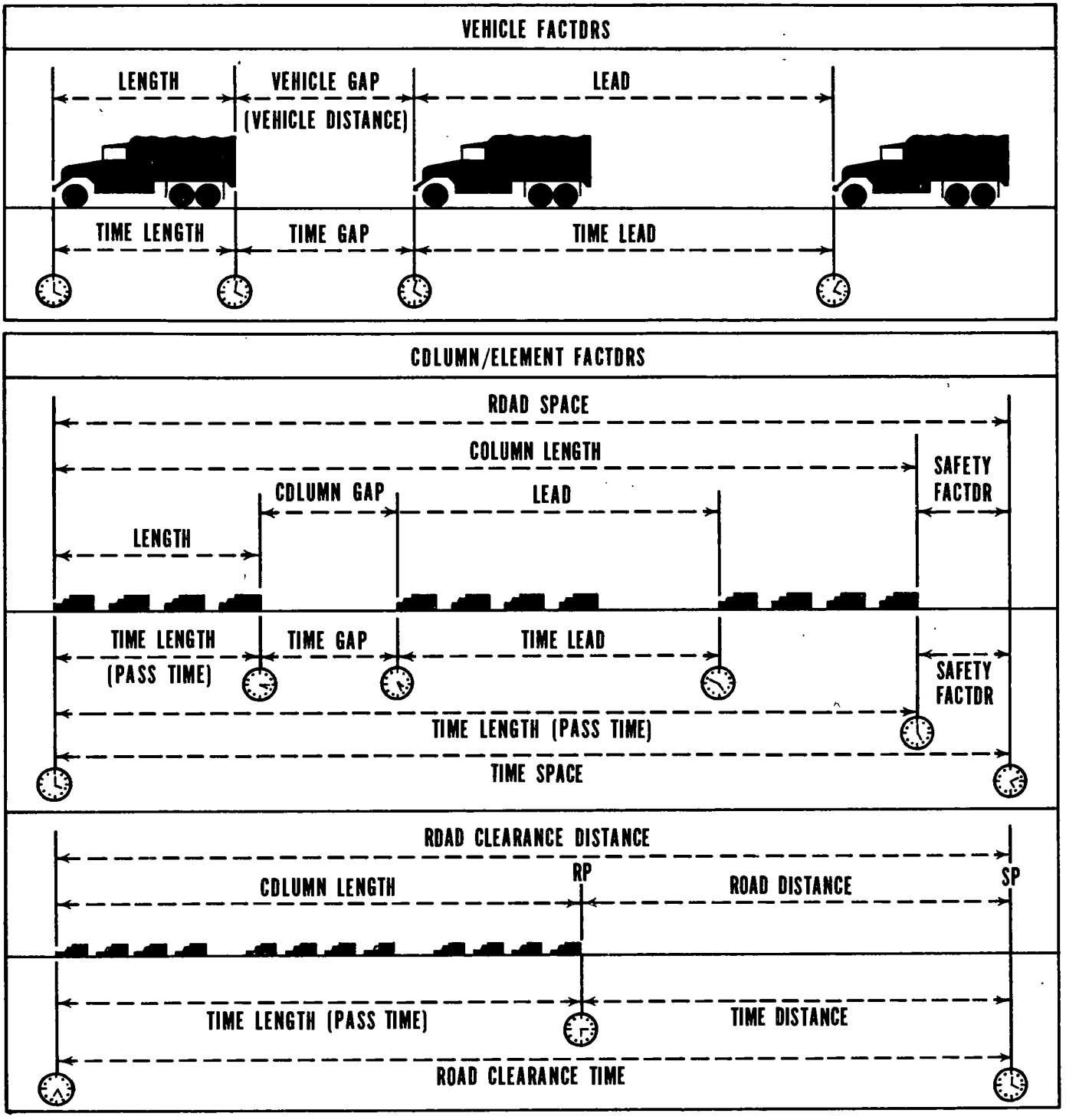


Figure 7–8. Distance and time factors.

als, each 1 kilometer long with a 0.5-kilometer gap between serials and a 1-kilometer gap between it and the following column, would have a column length of 4 kilometers and a road space of 5 kilometers.

(3) *Gap* is the distance between successive vehicles, called vehicle gap (distance), or between elements of a convoy or successive convoys, called column gap. It is measured from the rear of one element to the front of the following element.

(4) *Lead* is the linear spacing between the heads of elements in a convoy or between heads of successive vehicles, march units, or serials.

(5) *Road distance* is the distance from point to point by road.

(6) *Road clearance distance* is the distance that the head of a convoy must travel for the entire convoy to clear a given section of the road; in other words, it is the sum of the convoy's length and road distance.

b. Time Factors. Time in a convoy is expressed in hours or minutes. A planner must be able to tell at what time a convoy will pass a particular point on the route. He must compute how long it will take the convoy to go from one place to another. To plan efficiently, he uses time factors, each related to a corresponding distance factor (*a* above) as shown in figure 7–8.

(1) *Time length* is the time required for a convoy or a subgroup thereof to pass a given point. It may be referred to as "pass time."

(2) *Time space* is the time consumed while a convoy or one of its subgroups proceeds past any point en route. It includes the time gaps between subordinate elements and additional time required for safety and for maintaining flexibility needed at the rear of the column. In other words, it is the sum of the time length, time gaps, and time allowed to avoid conflict with following traffic.

(3) *Time gap* is the period of time between successive vehicles or elements of a convoy, measured from the rear of one element to the head of the next, as they pass a given point.

(4) *Time lead* is the period of time between individual vehicles or elements of a convoy, measured from head to head, as they pass a given point.

(5) *Time distance* is the time required to move from one point to another at a given rate of march. For example, it is the time required for the head of a convoy or any single vehicle of a column to move from one point to another at a given rate of march.

(6) *Road clearance time* is the total time a convoy or an element thereof requires to travel over and clear a section of road. Road clearance time equals time length plus time distance.

7–27. Measuring Movement

Movement is measured by finding how long it takes to move a given distance, usually expressed in kilometers per hour. Convoy planners use three terms to express rate of movement: speed, pace, and rate of march.

a. Speed is the actual rate at which a vehicle is moving at a given time. It is normally expressed in *kilometers per hour* (kmph) according to the speedometer reading.

b. Pace is the regulated speed of a convoy or an element as set by a lead vehicle, the pace setter. It is constantly adjusted to suit road, terrain, and weather. Pace is expressed in *kilometers per hour.*

c. Rate of march is the average number of kilometers traveled in any specific time period. It includes short periodic halts and short delays, but it does not include long halts, such as messing or overnight stops. It is expressed in *kilometers in the hour* (kmih).

7–28. Formulas for Distance, Rate, and Time

A move cannot be scheduled or a highway movement graph prepared without using certain basic terms and formulas. The terms make up the necessary vocabulary of a highway movement planner; the formulas represent the basic arithmetic. Regardless of the size of the move, the planner uses the same basic terms and formulas. Using these simple formulas, he can find the unknown factor necessary to complete his movement plan. The three basic march factors are distance (D), rate (R), and time (T). (Fig 7–9 presents a simple device for finding an unknown factor of distance, rate, or time.) When two of the three factors are known, the third can be found by a simple arithmetical equation, as—

$D = R \times T$ (distance equals rate multiplied by time),
$R = D \div T$ (rate equals distance divided by time), and
$T = D \div R$ (time equals distance divided by rate). The same formula is used to find time distance (TD).

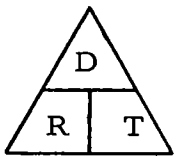
a. Determining Distance. To find how far a convoy travels, the distance must be determined. Since distance equals rate multiplied by time, if the rate of march is 40 kilometers in the hour and time is 4 hours, the distance is 160 kilometers: $40 \times 4 = 160$.

b. Determining Rate. Distance divided by time gives the rate. It is figured at kilometers traveled in the hour. If a convoy, for example, travels for 5 hours, including short halts, to complete a 190-kilometer trip, its rate of march is 38 kilometers in the hour: $190 \div 5 = 38$.

c. Determining Time. Distance divided by rate gives the time. Time is simply how long it takes to complete a move including short halts or other small delays. If the distance is 210 kilometers and the rate of march is 42 kilometers in the hour, the time is 5 hours: $210 \div 42 = 5$.

7–29. Preparing a Graph

a. A road movement graph shows the relationship between time and distance. It is prepared ongraph paper with a vertical scale showing distance and a horizontal scale showing time. The lower left corner of the graph repres-



Divide a triangle as shown. To find an unknown factor, cover it and the uncovered portion of the triangle gives you the formula for finding the unknown. For example, if distance (D) is unknown, cover it and RT (rate x time) remains. If rate (R) is unknown, covering R leaves $\frac{D}{T}$. Do the same for time (T), and you find $\frac{D}{R}$ remaining.

Figure 7-9. Finding an unknown factor of distance, rate, or time.

ents zero kilometers and X hours. The top number on the left vertical line shows the greatest number of kilometers to be traveled by any part of the movement; the bottom line shows the greatest number of hours which may be used by the entire move. A strip map showing critical points (CP's) along the route, such as cities, towns, road junctions, and bottlenecks, is drawn in the left margin on the same scale as that of the graph. Figure 7-10 shows a graph with only the movement of a column's first vehicle plotted on it, moving from Newport to Jackson Heights. Distance is plotted vertically, with each small block representing 3 kilometers. Time is plotted horizontally with each small block representing 12 minutes. The head of the convoy left Newport of 0400 hours and traveled 90 kilometers to Jackson Heights, arriving at 0700 hours, 3 hours after starting. What was the rate of march? Remember, the formula for finding this is R = D ÷ T.

b. March columns, serials, or march units are represented on a graph by parallel diagonal lines. The time it takes for the march element to pass any given point (time length or TL) is shown by the horizontal space between the diagonal lines. If the planner draws a horizontal line connecting the points representing the first and last vehicles of an element (head and tail), he is drawing the time length of that element. The head of the column is plotted at the start point on the vertical scale and at the time of starting on the horizontal scale; the time of clearance of the tail is then plotted. A march is shown in figure 7-11 with the parts of the graph labeled with the appropriate motor movement terms. The graph now completely pictures a move: the head and the tail movements are shown by the two parallel diagonal lines. This graph shows the convoy's length to be about 14 kilometers according to the position of its head and tail. The time length of the convoy is shown as 36 minutes; that is, it took 36 minutes for the entire convoy to clear the start point. Keep in mind that time distance is how long it took the head of any element of the convoy to go from the start point to the release point; for this move, time distance is 4 hours. Adding the time length to the time distance gives the road clearance time as 4 hours and 36 minutes: the time it takes the entire convoy to clear the release point.

c. Progress of a column, or element, is indicated by plotting time and distance on the graph as for sample movements in figure 7-12, using the planned rate of march. When halts are planned, they are shown on the graph. The graph can be changed to show any schedule changes as they occur. Figure 7-12 shows the scheduling of six separate organized motor moves and one foot march. This schedule is explained below.

(1) *Column A* is scheduled to leave the start point, Newport, at 0400 and clear at 0500, a time length of 1 hour. Distance to the release point, Hampton, is 120 kilometers and the rate of march is 30 kilometers in the hour. Therefore, the time distance is 4 hours: 120 ÷ 30 = 4. The time this column takes to complete the move is the time distance of 4 hours plus the time length of 1 hour, or 5 hours. The head would therefore arrive at the release point at 0800 and the tail at 0900.

(2) *Column B* makes a shorter move. It is scheduled to leave the start point, Mount Royal, at 0700, travel 48 kilometers at a rate of 24 kilometers in the hour, and complete the move in 2 hours. Time distance of the route at 24 kilometers in the hour is 2 hours (48 ÷ 24), but the planner must add the time length of the column, 30 minutes, to the time distance of 2 hours in computing the time required for the entire move (road clearance time).

(3) A *crossroad lateral movement* is scheduled to cross at Crossroad (CR) 1 from 0940 until 1310 hours. The graph shows plainly that the lateral movement will not interfere with any of the other moves.

(4) *Column C* is scheduled to move more slowly than the other motor columns. This is

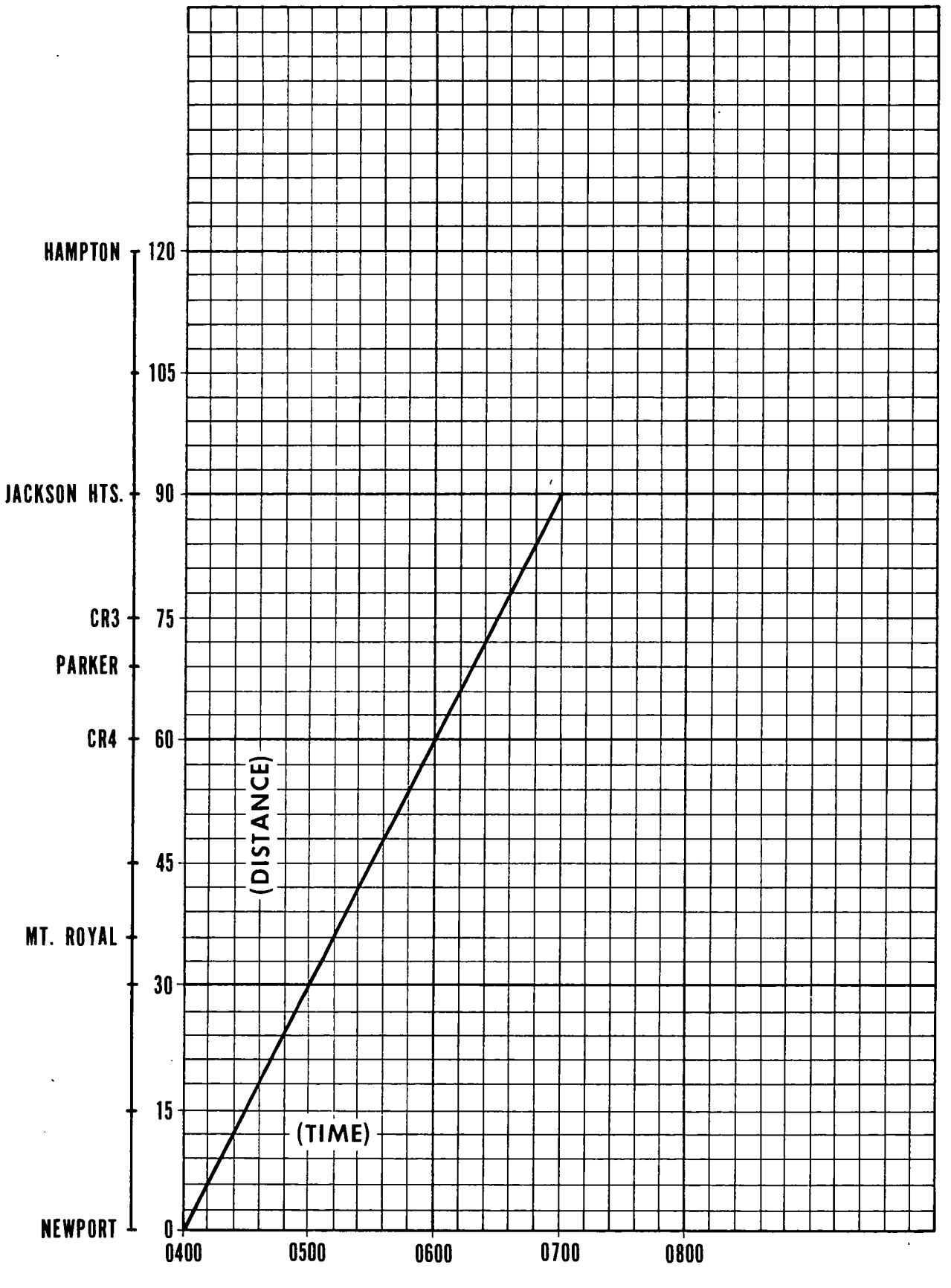


Figure 7–10. Schedule of head of column.

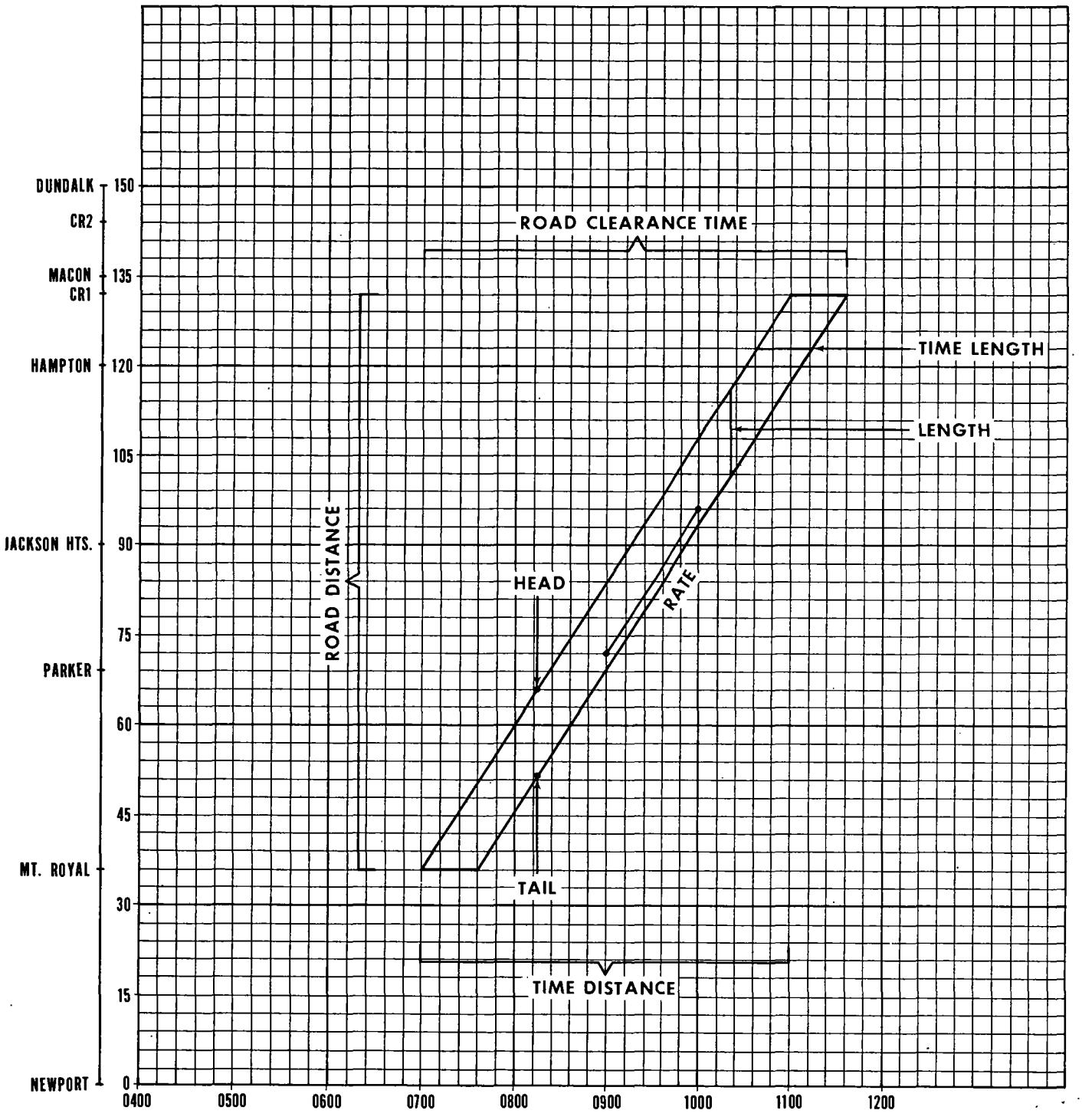


Figure 7–11. March graph showing movement of an entire column and showing appropriate motor movement terms.

apparent from the graph because the diagonal line showing time distance is not as steep as the lines of columns A and B and both elements of D. The steepness of a diagonal line on the graph indicates the rate of march of the column the line represents. Column C is scheduled to travel 132 kilometers at 18 kmih, a time distance of 7 hours and 20 minutes: 132 ÷ 18. The planner adds a 1-hour mess halt to the time distance and finds that the head of the column will require 8 hours and 20 minutes to complete the move.

(5) *Columns D–1 and D–2*, two elements of

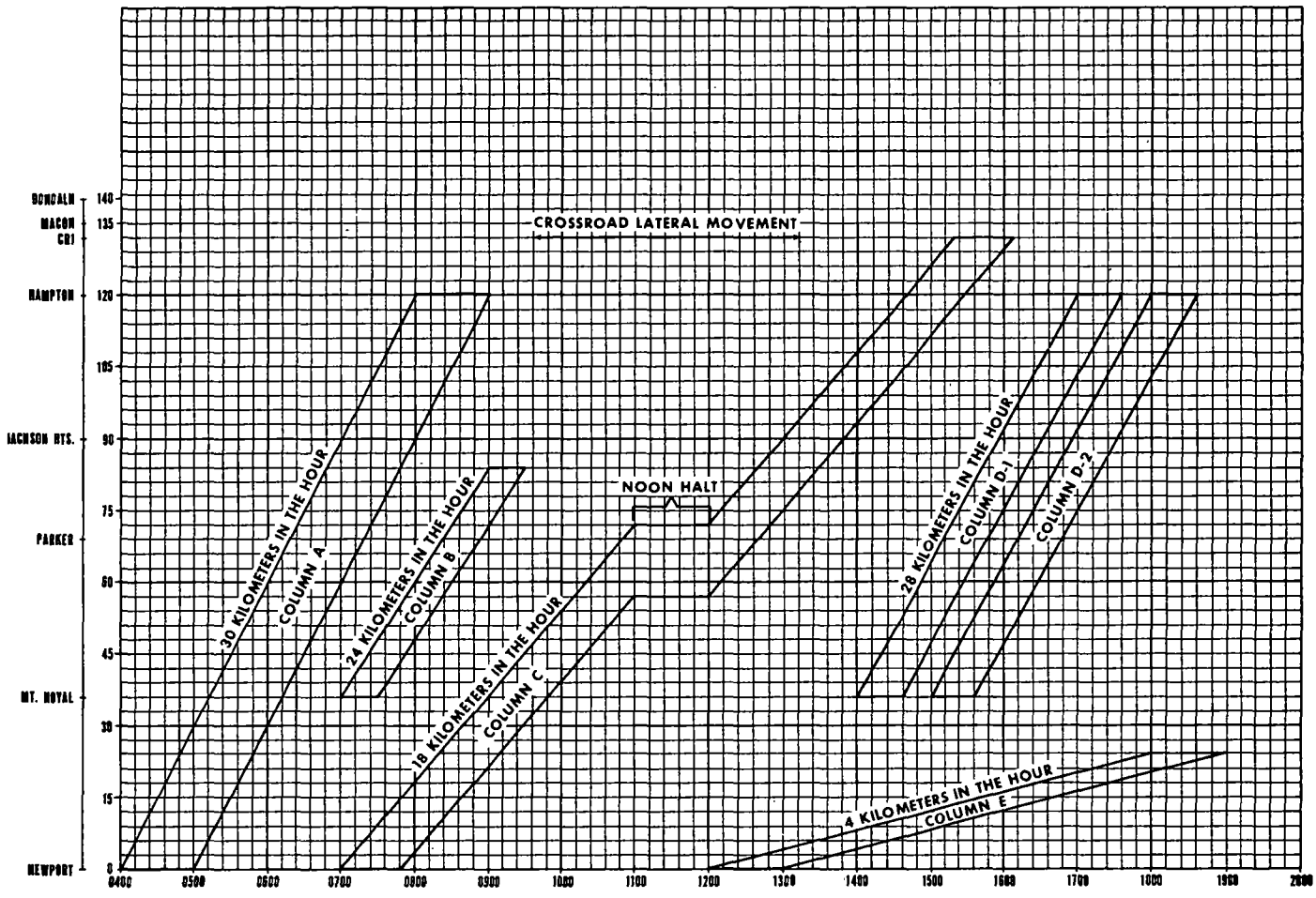


Figure 7–12. Scheduling moves.

one column, are scheduled to travel at 28 kilometers in the hour from the same start point to the same release point, one leaving 24 minutes after the other. The graph shows that D–1 left at 1400 hours and arrived at 1700—84 kilometers in 3 hours. If the rate of march in this case were unknown, it would be computed as follows: 84 kilometers (distance ÷ 3 hours (time) = 28 kilometers in the hour (rate). Because both elements of the move are depicted exactly the same on the graph, one parallel to the other, the rate will be the same for both.

(6) *Column E* is a foot march on the route. It is traveling slowly, 24 kilometers in 6 hours of walking time.

7–30. Restrictions

The commander of a road movement may be ordered not to move his convoy over certain sections of a route at specific times. The planner must schedule his road movements to comply with route restrictions.

a. Passing After Restriction Ends. To compute the earliest time the first vehicle of a convoy or an element thereof can cross the start point to clear the end of a route restriction without halting at the restriction, use the following formula:

End of restriction time plus safety factor minus time distance from start point to restriction point equals earliest time the first vehicle can cross the start point.

EXAMPLE: A restriction is in effect from 1140 to 1240, the distance from the start point to the restriction is 32 kilometers, and a safety factor of 15 minutes is in force before and after the restriction. This is a close column move executed at the rate of 16 kilometers in the hour; time length is 12 minutes. Substituting in the formula:

$$1240 + 15 \text{ min} - \frac{32 \text{ km}}{16 \text{ kmih}} = 1255 - 2 \text{ hours} = 1055$$

hours (earliest time a vehicle can cross the start point)

b. Passing Before Restriction Begins. To compute the latest time the first vehicle of a convoy can cross the start point to have the last vehicle arrive at the 1140 to 1240 restriction before it begins, use the formula:

Beginning of restriction minus safety factor minus time distance from start point to restriction minus time length.

Substituting in the formula:

$$1140 - 15 \text{ min} - \frac{32 \text{ km}}{16 \text{ kmih}} - 12 \text{ min} = 1125 - 2 \text{ hours} - 12 \text{ min, or 0913 hours (first vehicle leaves start point)}$$

7-31. Emergency Operations

Changes in the tactical situation, damage to roads, or traffic congestion may require adjustments of traffic routing and scheduling.

a. If a breakdown or serious interruption of the traffic plan can be anticipated, alternate plans should be prepared to meet the emergency. These plans may involve rerouting, rescheduling, and relocation of control and regulation personnel.

b. Traffic emergencies that cannot be anticipated require prompt solution in the field. Military police, in cooperation with highway regulation personnel, assist column commanders in taking immediate action. These field agencies (highway regulating points, traffic control points, military police motor patrols, and highway regulating point patrols) take care of local emergency routing to the traffic headquarters and to highway regulating points in the immediate area. Extensive rerouting is done only on order of the traffic headquarters.

c. On receipt of advice from the field, progressive adjustments of traffic plans can be made by the traffic headquarters. Changes in the plan are communicated to the field regulating and control elements and to other affected agencies as soon as possible so that the modified plan can be implemented locally.

7-32. Road Movement Tables

Previous discussion has pertained to the movement graph. Note, however, that a graph is an operations worksheet and is not usually issued to subordinate units. Instead, information obtained from it is published in the form of a road movement table (app G) which is issued to subordinate units. All information on the table comes from the computations and the graph prepared by the planner.

7-33. Critical Points

A critical point is any roadway structure or feature that limits road width, overhead clearance, or vehicle load class, as well as any feature that interferes with the meeting or crossing of two or more streams of traffic. Critical points include every bridge, overpass, underpass, ferry, ford, constriction, and sharp turn under a 30-meter (100-foot) radius. Railroad crossings are critical points whether the highway overpasses, underpasses, or crosses at grade level. The start point of a convoy is a critical point for other convoys. Crossroads and road junctions are special kinds of critical points; these are discussed in paragraphs *a* and *b* below. Usually a schedule for road movement does not list every critical point but only the most important and those at convenient checkpoints, such as at highway regulation points. A highway traffic headquarters assigns numbers to the critical points on the road net it regulates unless a place name, such as a town at the same point, can be used to indicate it clearly. Any numbering system may be used. However, once the critical points are numbered or named on the highway map and overlays are issued to the highway regulation points and traffic control posts, the designations are not usually changed. New numbers or names can be added at any time for new routes or features.

a. Crossroads are critical points that normally require the most attention to prevent schedule conflicts where two military routes cross one another at grade level. Their importance can be seen readily by picturing a convoy approaching an intersection where another convoy is just entering on the crossing route. One convoy must wait while the other clears the crossing. The highway traffic headquarters determines in advance which convoy has priority and tells regulating and control personnel so that they can keep the other convoy out of its way. Place names are often used to identify crossroads. For a rural crossroads without a name, or for one of several close together, numbers may be desirable. Overpasses and underpasses are marked as such; they are not shown as crossroads. The mark CR is used to identify only a grade crossing of two roads where traffic on each road occupies the crossing portion of both roads in passing through the intersection.

b. Road junctions, or the joining of two roads at grade level without crossing one another (as when a side road forms a Y or T with a main road) are critical points for highway regulation if traffic on the side road is frequent enough to interfere with that on the main road. Roads that join by overpass-underpass structures and cloverleaf are not to be designated as road junctions.

7-34. Critical Time and Point Graph

a. In paragraph 7-22, which discussed the methods used to schedule traffic, mention was

made of the critical time and point graph as an aid to the traffic headquarters in preventing conflicts and minimizing delays in highway movements.

b. A critical time and point graph (fig 7–13) is composed of subgraphs, one for each critical point considered. The four lines of graph for each critical point are marked with the cardinal points of the compass (north, south, east, and west) along the sides to show the predominant direction of movement or change of direction. The name or number of the critical point is marked along the left margin. The time of day is placed along the top on the vertical divisions of the graph in blocks short enough to show a quarter of an hour or less. A graph may show any time period—24 hours, 12 hours, 4 hours, etc. A serial number or other identification of the unit is made at each entry.

c. Data for critical time and point graphs are taken from road movement graphs or from road movement tables. Each unit preparing for a scheduled move submits a request for clearance directly to the highway traffic headquarters as far in advance as practical. Normally, when time is available, this is a written request for the proposed move. The highway traffic headquarters immediately posts by priority each request on the critical time and point graph it maintains for the day or days involved. Then it confirms, or changes if necessary for separation, balance, or distribution, the requested schedule and route, notifying the originator by oral or written communications depending on time available.

d. Referring to figure 7–13, note that the critical time and point graph contains a subgraph for each of three critical points (25, 26, and 27). The horizontal blocks in each subgraph are lettered N, S, E, W to indicate the direction in which a convoy is moving. The vertical lines represent time and are in divisions of 5 minutes. Examination shows that serial 225 traveling eastward will arrive at critical point 25 at approximately 0020 hours, and will clear that point at about 0040 hours. (Note that the block containing the serial number extends from the hour of arrival to the hour of departure.) The subgraph for critical point 26 shows that serial 225 will arrive there about 0130 hours, traveling eastward and turning northward, clearing the point about 0140 hours. A change in direction of travel at a critical point is indicated by a flag extending into the appropriate line on the graph opposite N, S, E, or W. The subgraph for critical point 27 shows that serial 226 traveling northward will arrive at the critical point at 0230 hours and will clear that point at 0300 hours.

e. When the road net is adequate for the volume of military traffic, a critical time and point graph and the schedules it represents may be fairly firm weeks in advance. However, if tactical or other situations require that a high-priority convoy use the roads on sudden notice, the highway traffic headquarters may have to notify the commander of a lower priority convoy of a new routing or schedule on short notice. Change instructions are given to a convoy commander through highway regulating point teams. The highway traffic headquarters changes its critical time and point graph before it issues change instructions to assure against further conflicts that may be caused by new routings or schedules.

f. On the day of actual movement, the highway traffic headquarters checks the progress of convoys, as reported by highway regulating teams, against the critical time and point graph for that day. When a convoy is reported off schedule, the highway traffic headquarters checks the graph for time and space separations from other convoys. If necessary, it reroutes, halts, or reschedules lower priority convoys to prevent conflicts, by issuing instructions to convoy commanders through highway regulating point teams (chapter 5) through the military police.

7–35. Planning a Highway Movement

The way to learn road movement computations and graph preparation is to actually plan a move. Appendix G has been developed to take the reader through the planning process, step by step. It gives all the details of a planned road movement, explaining the computations that must be made. Based on the computations, it develops the movement graph and the resultant movement table.

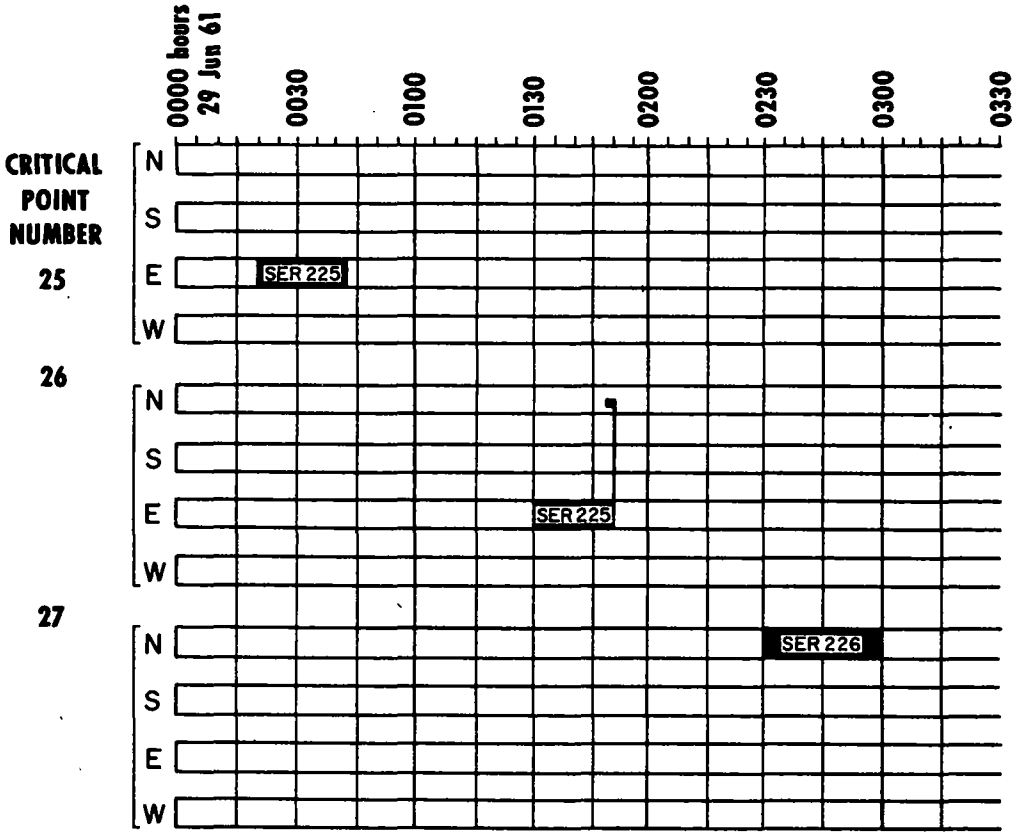


Figure 7–13. Critical time and point graph.

CHAPTER 8

COMMUNICATIONS

8–1. General

a. As discussed in chapters 2, 3, 4, and 5 of this manual, internal communication requirements are satisfied by personnel and equipment organic to the movement control units. They consist primarily of a wire net utilizing field type telephones connected to a field type switchboard, a message center, and FM radio for voice entry into radio nets as required by the mission. Entry into the Army communication system is provided by the Army signal organization serving the army area. The Army signal organization installs and operates the army area communications system consisting of a network of army area signal centers spaced throughout the army service area and corps service area and interconnected by high-capacity trunking systems. Each army area signal center operates a telephone central, a teletypewriter central, and a communications center that transmits and receives messages for units in its area. Messenger service is provided among area signal centers, but local messenger service to and from the area signal center must be provided by the unit. The area signal center installs wire lines (telephone and teletypewriter) to units within its area. It also operates a radio-wire integrated station that interconnects FM radios with the common telephone system on a push-to-talk basis.

b. Since distances between movement control activities normally exceed the organic wire laying capability and may exceed the range of organic radios, the army area communications system often provides the primary communications net available to movement control activities. Also, communication between a movement control activity and the units it supports is provided through the army area communications system. It is essential that each movement control center and each regional transportation movement office be connected to an area signal center.

c. Area signal centers are located throughout the field army area so as to provide easy access to the users, as well as facilities for alternate routing of traffic.

d. The number of telephone and teletypewriter circuits between an army area signal center and a movement control unit will normally be specified by the army communications-electronics operating instructions (CEOI). This number of circuits will be installed by the army area signal center upon receipt of notification of the move of a unit into its area. When moves are planned, notification must be given to the army area signal center as far as possible in advance of the move in order to insure that communications requirements can be met at the new location.

8–2. Policies

The communications-electronics staff officer of each major command is responsible for allocating electrical communications within the command, based on indicated requirements, availability of facilities, and priorities. Unit communications policies must conform to those established by higher headquarters.

8–3. Communications Responsibilities

a. Communications Chief. The communications chief is responsible to—

(1) Keep the unit commander informed concerning the communications situation.

(2) Coordinate communications with higher, adjacent, and subordinate units.

(3) Prepare communications plans.

(4) Supervise installation, operation, and operator maintenance of the unit's communication system.

(5) Determine communications equipment and supply requirements.

(6) Arrange for and supervise the training of communications personnel, to include the training of alternate operators.

(7) Prepare extracts of current CEOI and communications-electronics standing instructions (CESI) for use by communications personnel.

(8) Maintain liaison with the army area signal center supporting the area. FM 24–16 will assist the communications chief in preparing

orders, records, and reports pertaining to communications.

(9) Prepare radio net and wire system diagrams based on organic communications equipment and its employment and on nets outside the unit which the unit monitors or is part of.

b. Radio Operator. The radio operator is responsible for the proper use of the radio, to include maintaining communications security. He must be familiar with the CEOI and CESI with respect to radio procedures, call signs, and security. He is responsible for performing operator maintenance on his radio equipment. He must know the capabilities and limitations of the radio and must be familiar with the other facilities incorporated into the radio net of which the movement control unit is a part.

c. Switchboard Operator. The switchboard operator installs, operates, and maintains the unit switchboard. He must know the techniques of installation and operation of the field telephone equipment, the capabilities and limitations of the equipment, and the facilities incorporated into the system to which his switchboard is connected.

8–4. Communications Equipment Supply

Initial supply and replacement is made through normal supply channels. The supply sergeant, with the assistance of the communications chief, prepares and submits requisitions for equipment and supplies. Quantities of repair parts authorized for operator maintenance are issued initially with the equipment and are authorized to be kept on hand by the operator.

8–5. Maintenance of Communications Equipment

The radio operator maintains his equipment within the limits of his authorized operator maintenance. Maintenance performed by the operator includes protecting equipment from weather and rough terrain and adjusting, lubricating, and cleaning and drying the equipment. It may also involve replacing certain minor radio parts if such replacement does not require higher technical skills. When the equipment becomes inoperative and requires technical maintenance, it is turned in to the supporting maintenance activity for repair or direct exchange replacement.

8–6. Orders and Instructions Affecting Communication

a. Communications-electronics operating instructions are a type of combat order issued for technical control and coordination of communication within a command. They cover codes and ciphers; radio call signs and frequencies; telephone directory; and visual and sound signals. CEOI are classified, and copies of extracts must be safeguarded according to their security classification.

b. Communications-electronics standing instructions contain operational data not subject to frequent change and instructions for the use of the CEOI.

c. Within movement control units, communication procedures that can be standardized are made part of the unit CEOI and CESI. These procedures must not violate instructions disseminated in other types of official publication from higher headquarters.

8–7. Communications Security

a. Communications security consists of those measures taken to prevent or delay unauthorized persons from obtaining information of military value from communications sources. It is the responsibility of the movement control center commander to insure that communications security measures are understood and observed by unit personnel.

b. Unit personnel are concerned with two types of communications security: physical security and transmission security.

(1) Physical security is the protection of classified signal equipment and material—including copies of classified messages—that may have a military intelligence value for the enemy. Before vacating a unit position or other facility used for communications purposes, a thorough inspection should be made for copies of messages, carbons, maps, and orders that might prove beneficial to the enemy. Special attention must be given to CESI and CEOI items, including their production, distribution, storage, and final disposition when superseded or no longer needed. When a CEOI item or an extract of a CEOI item is compromised, the fact must be reported and the item replaced immediately. The unit commander should specify in the unit instructions precisely how the report is to be made. As a minimum, he normally requires security violations to be reported immediately through communication and command channels.

(2) Transmission security is designed to make it difficult for the enemy to intercept transmissions and to prevent him from using

friendly communications systems for purposes of deception. Since radio communications are susceptible to interception, direction-finding, traffic analysis, and deception, radio operators must be thoroughly trained in correct communications procedures and must be constantly alert not to divulge information to the enemy through faulty operating procedures and techniques. Personnel preparing messages for transmission, as well as radio operators, must be aware of the ability of the enemy to obtain information from radio traffic. For details on communications security, see FM 32–5 and, for cryptographic security, AR 380–41.

c. The following are some of the security precautions to be observed:

(1) Strictly observe radio silence.

(2) Do not transmit over a directed net without permission.

(3) Refrain from unnecessary transmissions, such as excessive testing.

(4) Transmit no faster than the receiving operator can receive.

(5) Do not use excessive transmitting power.

(6) Do not tune transmitters with the antennas connected.

(7) Avoid use of excessive time in tuning, changing frequency, or adjusting equipment.

(8) Transmit all messages by the most secure means available, consistent with established procedures.

(9) Use prescribed radiotelephone procedures to transmit clear-text messages by voice radio.

(10) Preplan the content of all messages to be transmitted, using prescribed authentication systems and eliminating all unnecessary transmissions.

(11) When answering inquiries received by radio, carefully consider the reply before transmitting the answer. This will reduce the possibility of a slip-of-the-tone that may disclose information that will prove beneficial to the enemy.

(12) Maintain a high standard of net discipline.

(13) Use message books in the preparation of messages for transmission. This practice, in addition to aiding in the maintaining of communications security, will provide a record of messages for later reference.

(14) Restrict use of communications channels—both radio and telephone—to transmission of official information only. Operators are strictly prohibited from using these facilities for personal conversations.

(15) Use only authorized codes. Locally devised systems can easily be broken by the enemy.

(16) Keep transmissions as brief as practicable.

(17) Never mention actual names or rank in the transmission of messages.

(18) Use the prescribed phonetic alphabet.

(19) Above all, never underestimate the ability of the enemy to intercept and use for intelligence purposes any messages transmitted.

8–8. Communications Training

a. Normally, communication specialists are trained either at service schools or at unit classes established within the command. When necessary, arrangements may be made through the signal officer of the command for the required training of these specialists. Additionally, other communication users, including officers, are given general training on radiotelephone procedures, telephone procedures, message writing, and communication security. It is the responsibility of the unit commander to make sure that all members of the company engaged in communications have sufficient training to perform their jobs in an efficient and effective manner.

b. Units should be trained in installing, operating, and maintaining their communications systems in fast-moving situations, under all conditions of weather and visibility and over all types of terrain.

c. The vulnerability of radio communications to enemy signal intelligence and electronic warfare activities, requires that operating personnel be thoroughly trained in communication security and electronic counter-countermeasures (ECCM). Additionally, alternate means of communication and alternate radio frequencies should be provided whenever possible. Details of electronic warfare are contained in FM 32–20; ECCM procedures for radio operators are discussed in FM 24–18.

APPENDIX A

REFERENCES

A–1. DOD Manual

4140.17–M	Military Standard Requisitioning and Issue Procedures (MILSTRIP).

A–2. DOD Regulation

4500.32–R	Military Standard Transportation and Movement Procedures (MILSTAMP).

A–3. Army Regulations

37–103	Finance and Accounting for Installations, Disbursing Operations.
55–355	Military Traffic Management Regulation.
58–1	Joint Procedures for Management of Administrative Use Motor Vehicles.
59–8	Military Airlift Command—Requirement Submissions, Space Assignments and Allocations, and Priorities.
59–106	Operations of Air Force Air Terminals.
220–15	Journals and Journal Files.
310–3	Preparation, Coordination, and Approval of Department of the Army Publications.
310–25	Dictionary of United States Army Terms.
310–50	Authorized Abbreviations and Brevity Codes.
340–18-series	The Army Functional Files System.
380–41	Control of COMSEC Material.
(C) 380–52	Nonmachine Cryptosystem and Authentication Systems (U).
(C) 530-Series	Operations and Signal Security.
700–58	Report of Packaging and Handling Deficiencies.
700–93	Processing and Shipping DOD Sponsored Retrograde Materiel Destined for Shipment to the United States, Its Territories, Trusts, and Possessions.
725–50	Requisitioning, Receipt, and Issue System.
740–32	Responsibilities for Technical Escorts of Dangerous Materials.
746–1	Color, Marking, and Preparation of Equipment for Shipment.

A–4. Field Manuals

5–36	Route Reconnaissance and Classification.
8–10	Medical Support, Theater of Operations.
11–23	Theater Army Communications Command.
12–11	Administrative Support in Theaters of Operations.
14–3	Comptroller Support in Theaters of Operations.
19–4	Military Police Support, Theater of Operations.
19–25	Military Police Traffic Control.
19–30	Physical Security.
24–1	Tactical Communications Doctrine.
24–16	Signal Orders, Records, and Reports.
24–18	Field Radio Techniques.
(C) 32–5	Signal Security (SIGSEC) (U).
(C) 32–20	Electronic Warfare (U).
54–1	The Logistical Command.

54–3	The Field Army Support Command.
54–4	The Support Brigade.
55–1	Army Transportation Services in a Theater of Operations.
55–8	Transportation Intelligence.
55–10	Army Transportation Movements Management.
100–27	US Army/US Air Force Doctrine for Tactical Air Lift Operations (AFM 2–50).
101–10–1	Staff Officers' Field Manual: Organizational, Technical, and Logistical Data—Unclassified Data.
101–40	Armed Forces Doctrine for Chemical and Biological Weapons Employment and Defense.

A–5. Technical Manuals

38–250	Packaging and Materials Handling: Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft (AFM 71–4, NAVSUP Pub 505, MCO P4030.19C, DSAM 4145.3).

A–6. Technical Bulletin

55–46–1	Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment.

A–7. Tables of Organization and Equipment

11–500	Signal Service Organization.
14–500	Finance Service Organization.
55–2	Headquarters and Headquarters Company, Transportation Command.
55–4	Transportation Movement Control Agency.
55–6	Transportation Movement Control Center (Field Army Support Command).
55–7	Transportation Movement Control Center (Corps Support Brigade).
55–52	Headquarters and Headquarters Company, Transportation Composite Group.
55–62	Headquarters and Headquarters Company, Transportation Brigade, Field Army Support Command or Corps Support Command.
55–500	Transportation Service Organization Headquarters Units.
55–540	Transportation Motor Transport Teams.
55–560	Transportation Terminal Service Teams.
55–580	Transportation Movement Control Teams.

A–8. Department of the Army Pamphlets

310–1 thru 8	Indexes for Military Publications.
310–35	Index of International Standardization Agreements.
750–1	Commanders' Guide of Preventive Maintenance Indicators.

A–9. Department of Defense Forms

6	Report of Packaging and Handling Deficiencies.
1092	Railroad Car Record.
1265	Request for Convoy Clearance.
1348–1	DOD Single Line Item Release/Receipt Document.
1384	Transportation Control and Movement Document.
1385	Cargo Manifest.
1386	Ocean Cargo Manifest Recapitulation and Summary.
1387	Military Shipment Label for Transportation Priority 3.
1387–1	Military Shipping Tag.
1387–2	Special Handling Data/Certification.

A–10. Department of the Army Forms

1–1	Personnel Data Change Report.
9–1	Materiel Inspection Tag.
3803	Daily Installation Situation Report.
2028	Recommended Changes to Publications.
2063–R	Prescribed Load List.
2166–4	Enlisted Efficiency Report.
3318	Record of Demands—Title Insert.

A–11. Standard Forms

361	Discrepancy in Shipment Report.
1103	US Government Bill of Lading.

A–12. Other

	Department of Defense Military Pay and Allowances Entitlements Manual.
CG–108	US Coast Guard Rules and Regulations for Military Explosives and Hazardous Munitions.

APPENDIX B

DOCUMENTATION OF FREIGHT AND UNIT MOVEMENTS

Section I. INTRODUCTION

B–1. General

a. Purpose. This appendix is intended as a guide to illustrate procedures used in the preparation of the transportation control and movement document (TCMD). The appendix is essentially an extract from DOD Regulation 4500.32–R (Military Standard Transportation and Movement Procedures (MILSTAMP)) of the codes, formats, and procedures applicable to documentation of shipments originating in a theater of operations. Section II of this appendix concerns cargo movement, and section III discusses the unit move.

b. Scope.

(1) The greater part of theater-originated freight (cargo) shipments may be properly documented by using procedures set forth in this appendix in conjunction with DOD Regulation 4500.32–R (MILSTAMP). It is stressed, however, that because MILSTAMP is subject to change, the data contained in this appendix is for illustrative purposes only. Therefore, to avoid conflicts and to assure that current data and procedures are used, MILSTAMP must be referred to in the actual preparation of the TCMD in the field.

(2) MILSTAMP (or current changes thereto) may not always be available to personnel at the lower working levels. When this is the case, the responsible command should extract applicable portions of MILSTAMP for distribution to the field as appropriate. It is essential that the information be maintained current.

c. Concept of MILSTAMP.

(1) MILSTAMP is designed to—

(*a*) Standardize movement and documentation requirements and procedures within the defense transportation system through the use of uniform coded and noncoded data, formats, and procedures.

(*b*) Interface with other military standard logistic systems (for example, military standard requisitioning and issue procedures (MILSTRIP)).

(*c*) Provide for use of mechanized and manual techniques and high speed communication.

(2) Through the use of nonduplicating transportation control numbers (TCN), MILSTAMP provides the capability to trace shipments in the defense transportation system. (See app C for a discussion of the TCN.)

d. Scope of MILSTAMP. MILSTAMP is applicable in whole or in part to all shipments entering the defense transportation system excepting those shown in paragraph 6–3 of this manual.

e. Forms and Formats. See annex I to this appendix.

f. Terms. An understanding of the terms discussed below is essential to an understanding of documentation of movements. Additional terms concerned with movement control are defined in the glossary at the end of this manual.

(1) *Materiel release order (MRO).* This is an order issued by an accountable supply distribution activity directing a nonaccountable shipping activity within the same supply distribution complex to release and ship materiel. The MRO (DD Form 1348–1 (DOD Single Line Item Release/Receipt Document)) (fig B–I–1) serves as a source for basic entries on the TCMD.

(2) *Shipment activity.* A military activity or other agency that plans for, physically assembles, consolidates, documents, and arranges for movement of materiel for the accounts of the military departments or other authorized agencies.

(3) *Shipment unit.* A shipment unit consists of one or more items for shipment to one ultimate consignee under one key TCN. The shipment unit is the basic shipping entity for control of cargo moving in the defense transportation system, and for documentation, movement clearance, and marking. The shipment unit is established in the shipment planning operation,

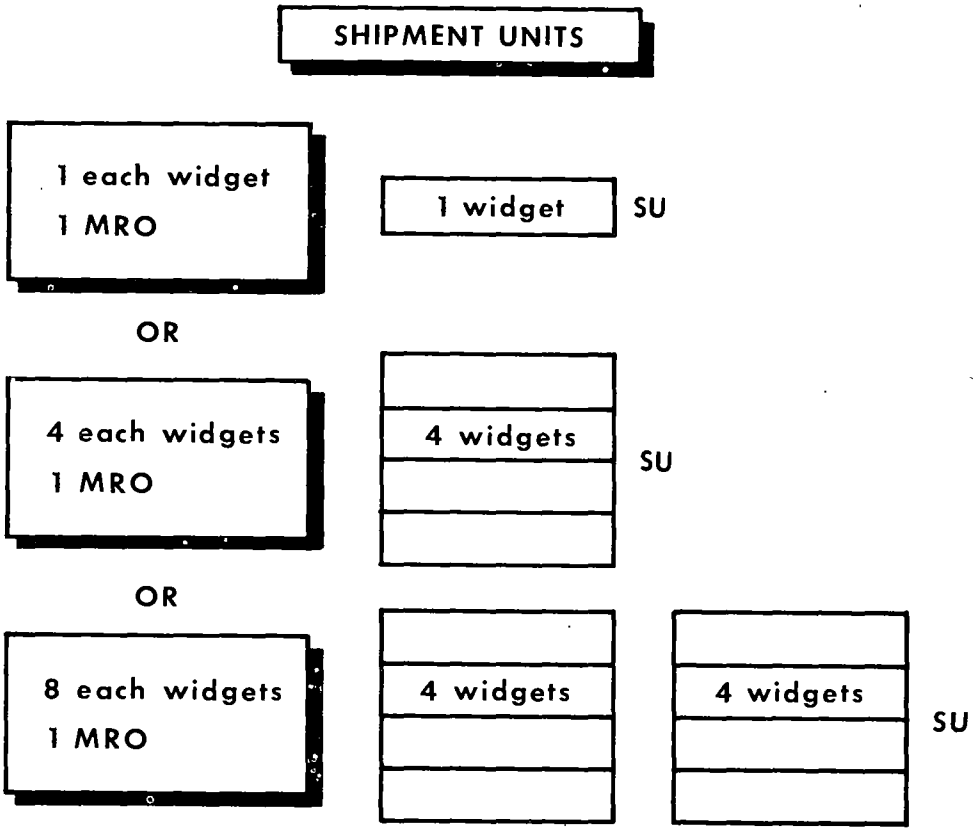


Figure B–1. Shipment units consisting of a single line item.

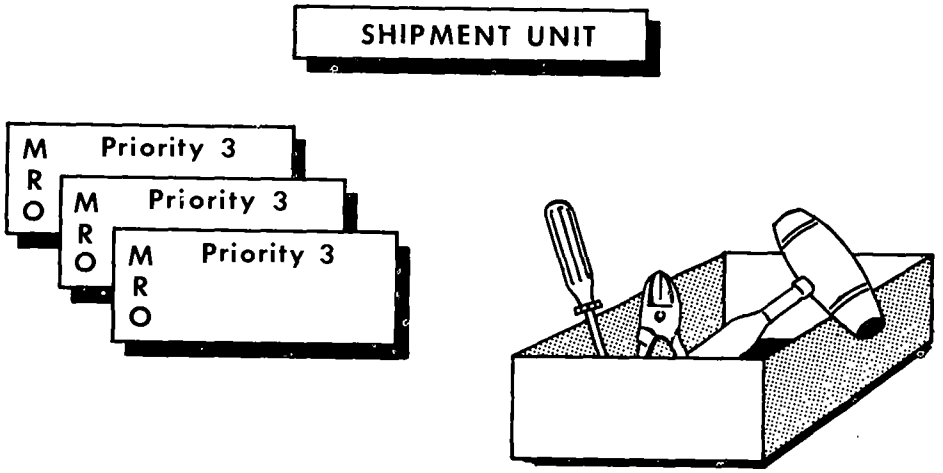


Figure B–2. Shipment unit consisting of compatible line items with the same movement priority.

is assigned a TCN, is controlled as a separate entity from origin to ultimate consignee, and requires its own TCMD. A shipment unit may consist of one of the following (refer to MILSTAMP to assure consistency with current procedures):

(*a*) A single line item of supply shipped loose or in one or more containers (fig B–1).

(*b*) A number of compatible line items of supply with the same movement priority, packed in a single shipping container, and destined for the same ultimate consignee (fig B–2).

(*c*) A number of line items of supply with the same transportation priority, in a specific MILSTAMP commodity category, packed in more than one shipping container when the same basic TCMD data are applicable to all items and when the total quantity of materiel is

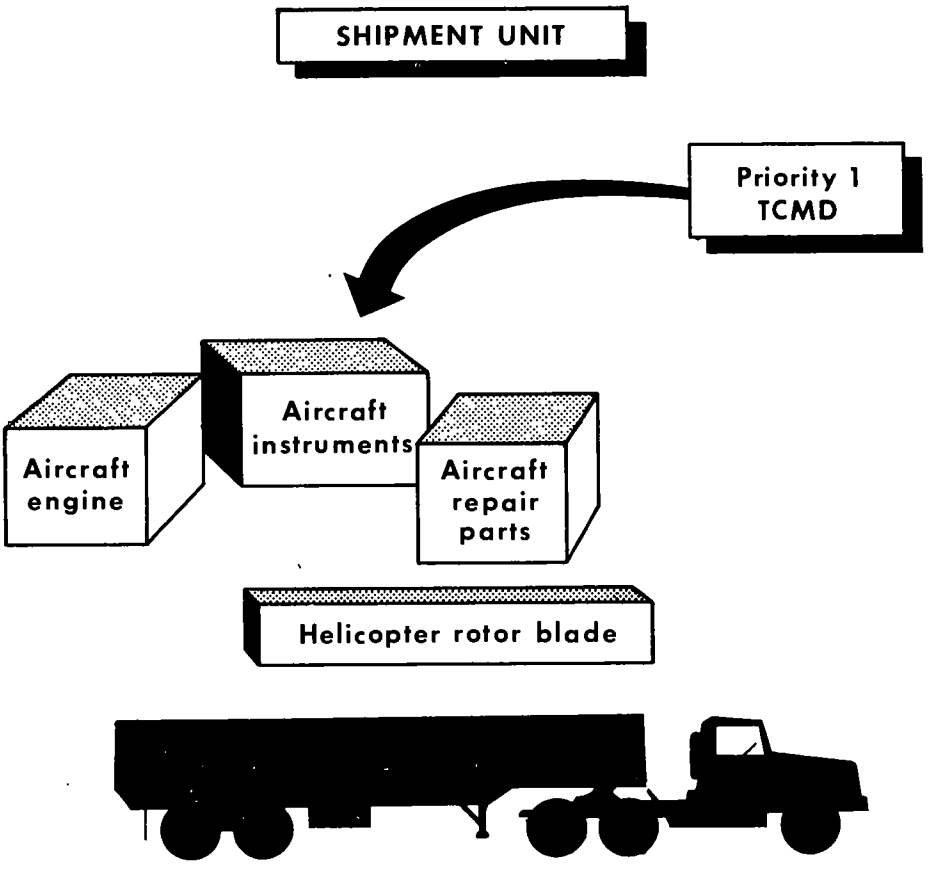


Figure B–3. Shipment unit consisting of a number of line items of a specific MILSTAMP commodity category not in excess of a single truckload.

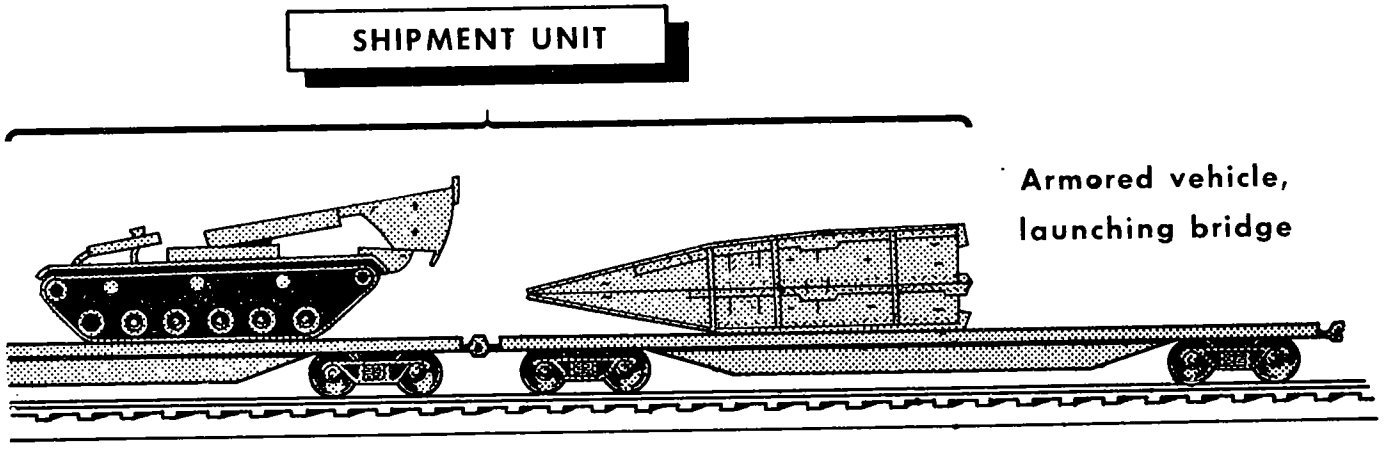


Figure B–4. Shipment unit consisting of a set that must move as a single unit.

not in excess of a single truck or railcar load, except in cases when assemblies or sets are moved as a single unit (fig B–3).

(*d*) Each assembly or set that must move as a single unit (fig B–4).

(*e*) Each vehicle, wheeled trailer or gun, aircraft, or controlled container; however, when vehicles or wheeled trailers are physically secured together for movement, the shipment unit will be comprised of the number of vehicles or trailers so unitized (fig B–5).

(4) *Consolidation of shipments.*

(*a*) *Prerequisites for consolidation.* A consolidated shipment is made up of a number of individual shipment units that have been placed

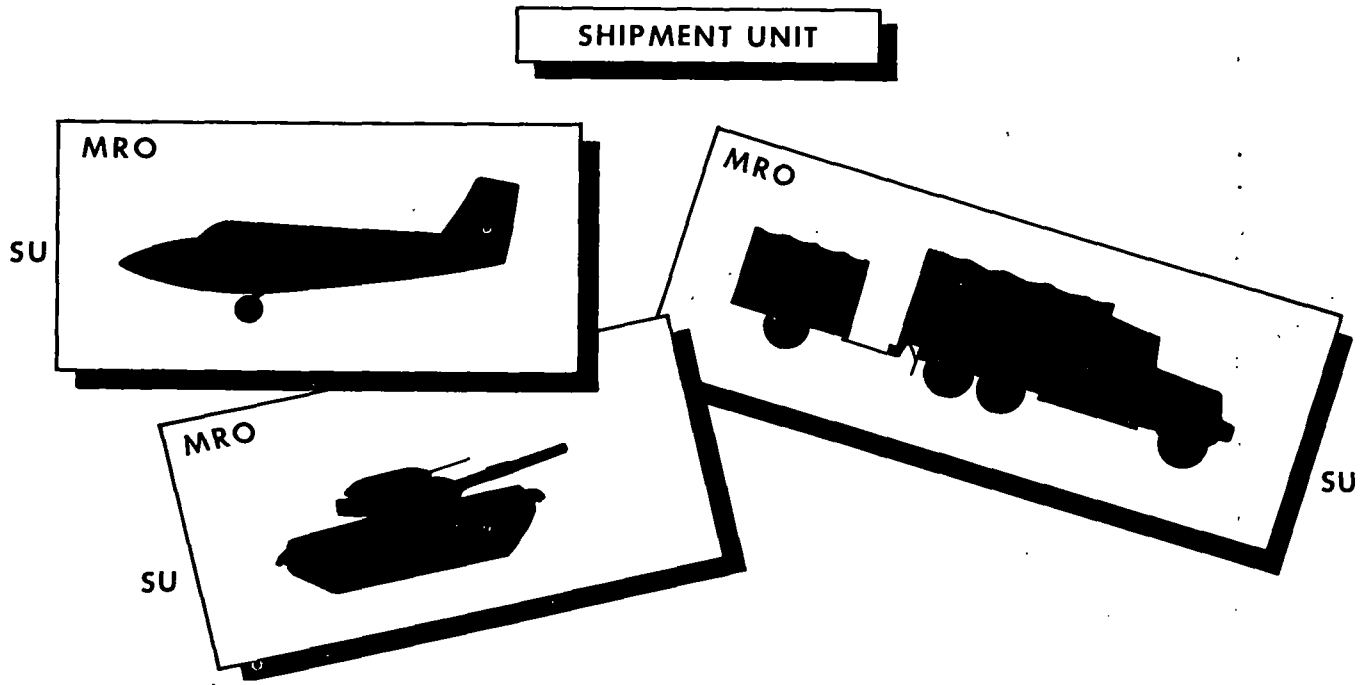


Figure B–5. Shipment units consisting of single vehicles and coupled truck and trailer.

together on a pallet (the US Air Force 463L pallet, for example) or have been placed in a CONEX or other type of container, military or commercial. Subject to certain exceptions, shipment units may be consolidated provided each individual shipment unit in the consolidated shipment has the same break-bulk point or ultimate consignee and provided further that in the case of materiel falling under issue priority group/transportation priority 1 and 2 (app D), each individual shipment unit has the same priority. (See para B–II–14 for exceptions to consolidation.)

(*b*) At this point, it is well to particularly stress that "NORS" (not operationally ready supply) shipments are not consolidated with other materiel in a single shipment unit, nor is any priority 1 materiel that is coded "999" in the required-delivery-date entry of the MRO document number. A NORS shipment is indicated by the prefix G in the shipment serial number (para C–2 of app C) and requires 999 as the required-delivery-date entry in the TCMD. Code 999 takes precedence over all other transportation priority 1 shipments and, being the highest priority item, must be expedited through the system.

(*c*) A consolidated shipment is identified by the TCN of the individual shipment unit having the earliest required delivery date (fig B–6); however, the remaining (secondary) individual shipment units in the consolidated shipment must retain their identity throughout the shipment. Identification of the consolidated shipment and the individual units comprising the consolidation is provided by TCMD entries (fig B–I–2). Enter the TCN and related data of the controlling shipment in the prime data portion of the TCMD and the first line of the trailer portion. Enter the TCN's and related data of the secondary shipments in subsequent lines of the trailer portion of the TCMD.

B–2. Responsibilities

Responsibilities of the shipper and of movement control and transshipment activities under MILSTAMP may be broadly defined as follows:

a. Shipping Activity.

(1) Prepares supplies for shipment to include packaging and marking.

(2) Prepares the TCMD, completes shipper certification, and distributes DD Form 1348–1 (MRO). (Copies 1 and 6 of the MRO are retained by the shipper; copy 2 is placed on the outside of the container; and copies 3, 4, and 5 are placed inside the container and accompany it.)

b. Movement Control Activities.

(1) Accept cargo offerings.

(2) Verify accuracy and completeness of the TCMD, and provide guidance to the shipping activity in preparation or correction of the TCMD.

(3) Perpetuate TCMD data to transship-

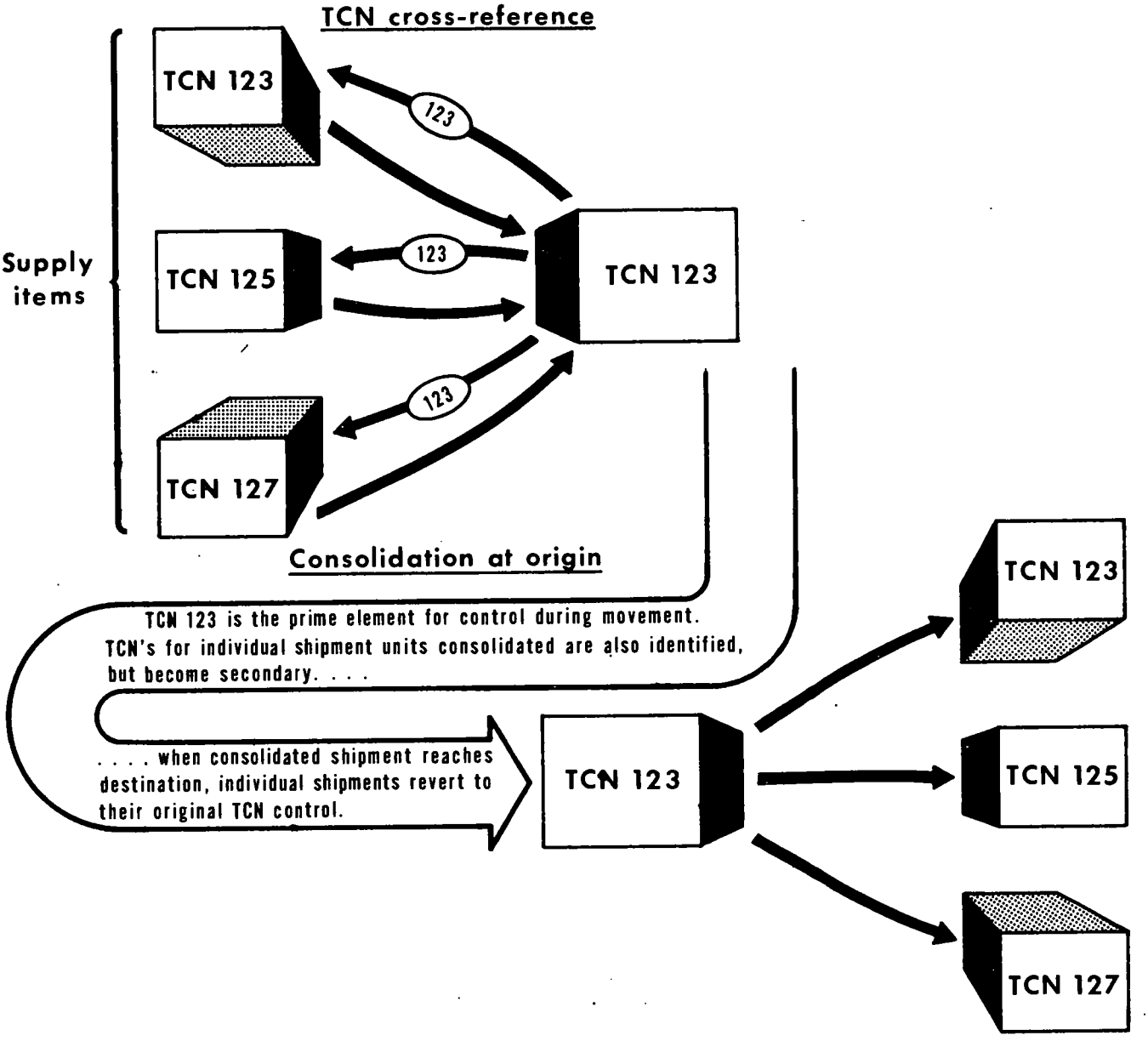


Figure B–6. TCN identification of a consolidated shipment.

ment activities (for example, in the case of retrograde material, to the port of embarkation).

c. Transshipment Activity.

(1) Receives cargo and documentation from the shipping activity or carrier.

(2) For cargo moving on forward from the transshipping point, annotates the TCMD to show receipt and further shipment.

(3) For retrograde cargo, verifies the accuracy and completeness of the TCMD, insuring accomplishment of certification in accordance with AR 700–93 and AR 746–1 as discussed in paragraphs 6–7 and 6–8 and insuring that the shipper has marked the cargo as shown in paragraph 6–5.

(4) For retrograde cargo, prepares ocean cargo manifest by perpetuating all TCMD data and adding the vessel/voyage identification and stow location.

(5) Distributes manifest to port of debarkation and other activities as shown in figure 5–10, DOD Regulation 4500.32–R.

Section II. PREPARATION OF TCMD FOR A FREIGHT SHIPMENT

B–3. Responsibility for Documentation

This section describes the preparation of the documents necessary to account for and control the freight shipment unit while it is in the

movement system. The documents discussed here are prepared by shipping activities, transshipping activities, and terminals. Note that movement control personnel do not prepare the documentation; rather, as required, they assist and advise the shipper in preparing the documents, and check completed documents to assure that they are accurate and contain all required information. Reference must be made to MILSTAMP to assure currency of procedures and formats.

B-4. Preparation of the TCMD

Every shipment unit must have a TCMD prepared using DD Form 1384. The TCMD data for each shipment unit will include the basic information shown herein as prime document elements of data. When an "NOS" (not otherwise specified) type water commodity code is used, and for shipments of perishable subsistence, a miscellaneous information trailer entry (T_9)[1] will be used in the documentation to provide a brief description which most nearly identifies the contents of the shipment. (See para B-II-2 of annex II of this appendix for derivation of identifiers used in trailer entries.) Additionally, if the dimensions of any piece of the shipment unit exceed 6 feet in any direction (except for CONEXes), an outside dimension trailer entry (T_5) will be made on the TCMD for each different dimensional exception. Shipment units of Government vehicles, wheeled trailers or guns, or aircraft require special outsize dimension and identification data (TV5). Any additional information necessary for identification, delivery, or handling of the shipment unit, including seal numbers for classified shipments, will be shown in the miscellaneous information trailer entry (T_9). This paragraph explains the codes required on the TCMD for the prime and trailer entries. Block numbers relate to the block number of the manual version of the TCMD. Where the first line entry on the TCMD trailer would simply duplicate entries in the header portion of the TCMD, entry in the header portion is optional. (See fig B-I-2 for a sample TCMD.)

[1] As written, indicatea that the second character of the three-character code is missing.

a. Prime Document Elements of Data (fig B-I-2).

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
1	1-3	Document identifier	The document identifier code specifies the format for basic shipment identification and type of TCMD; that is, vehicle, ammunition, etc. (para B-II-2).
2	4-8	Trailer-container	Used for all shipments moving in containers, roll-on/roll-off trailers (para B-II-3).
3	9-14	Consignor	Identifies shipping activity and is taken from block A, DD Form 1348-1 (fig B-I-1) or DOD Activity Address Directory (DOD 4000.25D (FOUO). For Sealand shipments, enter SLND plus length of SEAVAN (for example, SLND 35). T_2 TCMD is for SLND code format only.
4	15-19	Commodity-special handling	Identifies material for vessel planning, ocean manifesting, Military Sealift Command billing, cost accounting, contractor payment, and cargo exception and special handling. Air shipment carries a two-position code and surface shipment a five-position code. The predominant commodity within a shipment determines the descriptive code (para B-II-4).
5	20	Air dimension	A one-position code that relates the dimensions of the largest piece of equipment to door sizes of various aircraft (para B-II-5).
6	21-23	Port of embarkation	Port designator code for the loading terminal. Paragraph B-II-6 shows examples of port designator codes and air terminal identifier codes. For a complete listing, see appendix B13 to MILSTAMP.
7	24-26	Port of discharge	Same as above, except used to show destination.
8	27	Mode	Used to indicate transportation mode (para B-II-7).
9	28-29	Pack	The package code describes the shipping container or configuration (para B-II-8).
10	30-46	Transportation control number	The nonduplicating number which identifies a specific shipment and permits control of the shipment movement from shipping activity to ultimate consignee (para B-II-9).

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
11	47–52	Consignee	The activity address code of the consignee. If a MILSTRIP shipment, the destination activity address is taken from block B of DD Form 1348–1 (fig B–I–1). If a non-MILSTRIP shipment, the address is taken from DOD 4000.25D (FOUO).
12	53	Priority	The priority code assigned is based on the urgency of need of the consignee. It is used to determine the type of movement and, if applicable, the required delivery date. Determine the MILSTRIP priority code from columns 60–61 of DD Form 1348–1 and then convert the MILSTRIP priority to the MILSTAMP priority as follows: *MILSTRIP priority* — *MILSTAMP priority* 01 to 03 — 1 04 to 08 — 2 09 to 15 — 3 (Any movement control representative may challenge a priority if there appears reason to suspect its validity. For example, a priority 1 shipment to be moved 100 miles having a required delivery date of 14 days away would obviously be suspect. However, a shipment cannot be held up pending resolution of the challenge.)
13	54–56	Required delivery date	A required delivery date is entered for shipments originating from MILSTRIP only. The required delivery date is taken from columns 62–64 of DD Form 1348–1. When the serial number on the DD Form 1348–1 indicates a "NORS" (not operationally ready supply) request, the required delivery date is shown as "999" and takes precedence over priority 1. If no required delivery date is indicated, leave the space blank.
14	57–59	Project	If the movement of cargo is for a specific special project, a project code may be assigned by the shipping activity. If so, the code will appear under columns 57–59 of the MRO (DD Form 1348–1). If a project code is not specified on the MRO, leave the space blank on the TCMD.
15	60–62	Date shipped	Julian date shipped, or date shipment is available for movement. This entry is used to determine the age of the shipment and to evaluate transportation performance. (The entry is left blank on a cargo offering document but annotated on the onward movement document.) When shipment is by air, the hour code is required as shown in paragraph B–II–10.
16	63	Estimated time of arrival (ETA).	This entry is used to identify the number of days in transit from the consignor to the air or surface POE and to establish an ETA date based on the date the shipment was moved or was available for movement (para B–II–11).
17	64–67	Transportation account	The transportation account code is used in conjunction with the commodity code and is the basis for cost accounting and contractor payment reimbursement. (Military Sealift Command and Military Airlift Command are industrially funded, and must be reimbursed for services performed.) See paragraph B–II–12 for the principal codes used in an oversea theater. A complete list is contained in annex B12 of MILSTAMP.
18–20		Carrier, flight-truck-voyage document number, reference.	These entries are not considered prime data, and are optional.
21		Remarks	Enter here any remarks that may be pertinent to the movement from the consignor to the POE. However, this is not considered prime data and is optional.
22	68–71	Pieces	Enter here the total number of pieces (based on type pack (block 9)) that are included in the shipment unit.
23	72–76	Weight	Total weight of shipment in pounds.
24	[a]77–80	Cube	Total size of shipment unit in cubic feet.
25–27			For use of transshipment activity; self-explanatory.
28–30			For use of consignee; self-explanatory.
31			For any additional remarks or other entries desired. (The transportation movement release number is entered here.)

b. TCMD Entries for a Shipment Unit of Outsize Dimensions and Government Vehicle, Wheeled Trailer or Gun, or Aircraft (fig B-I-3). This entry is required for all shipment units exceeding 6 feet in any direction. Multivehicle shipment units require only a single "TV5" entry; otherwise, use a TV5 for each item.

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
32	1-3	Document identifier	The document identifier code specifies the format of the dimension entries; that is, TV5 for vehicles or T_5 for other outsize shipments.
33	4-8	Trailer container	Not required, or same as block 2 in prime document.
34	9-14	Consignor commodity abbreviation.	If a vehicle, model number (not more than six characters) or abbreviated nomenclature.
35-42	15-53		Not required, or same as blocks 4 to 12 in prime document.
43		Remarks	Dimensions of outsize piece or vehicles; length, width, and height are expressed in inches, using five, three, and three digits, respectively (for example, 00161L072W096H). This information is required for vessel planning and cargo manifesting.
	54-58		Length in inches,[2] preceded by necessary zeroes.
	59		Show L.
	60-62		Width in inches,[2] preceded by necessary zeroes.
	63		Show W.
	64-66		Height in inches,[2] preceded by necessary zeroes.
	67		Show H.
44	68-80	Additional remarks (TV5).	For Government vehicle, wheeled trailer or gun, or aircraft, show last 13 positions of service identification number (leave blank for multiservice shipment units).
44a	(68-71)	Pieces (for shipment unit other than 44 above) (T_5).	Number of pieces to which dimensions apply.
44b	(72-76)	Weight (for shipment unit other than 44 above) (T_5).	Weight of one outsize piece.
44c	(77-80)	Cube (for shipment unit othe than 44 above) (T_5).	Cube of one outsize piece.

[2] For fractions, use next highest whole number.

c. TCMD Entries for Descriptive or Miscellaneous Information Data Elements (fig B-I-4).

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
32	1-3	Document identifier	Document identifier code specifies the format of the miscellaneous entry (for example, TX9) (para B-II-2).
33-42	4-53		Leave blank.
43-44	54-80	Remarks	For miscellaneous information as appropriate; for example, in the case of retrograde cargo, include such shipment descriptive data as length, width, height, cube, weight, Federal stock number, the in-the-clear "mark for" address, and shipper certification. (See para 6-7 and 6-8 for a discussion of shipper certification.) Entries are limited to 27 characters per line in the remarks section. (See fig B-I-5 for example of entries in blocks 43-44.)

d. Ammunition, Explosives, or Dangerous Shipment Identification-Entry on the TCMD (fig B-I-6).

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
32	1-3	Document identifier	The document identifier code specifies the format of the identification data entry on the TCMD (para B-II-2).
33	4-8	Trainer container	Leave blank.
34	9-14	Consignor commodity abbreviation. Other.	If an ammunition shipment (TE6), show the round count (not to exceed six positions). For documentation of dangerous articles, a six-position abbreviation is entered in column 34 (par B-II-13).
35-42	15-53		Leave blank.
43-44	54-80	Remarks	Enter Federal stock number, Departmnet of Defense document identifier, and nomenclature required for vessel planning and cargo manifesting to include number of pieces, weight (in pounds), and cube. For dangerous articles, enter the true shipping name.

e. Ammunition and Explosives Shipment Lot Number Entry (fig B–I–6).

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
32	1–3	Document identifier	Document identifier code specifies the format of ammunition lot number data entry (TE7). It is required for each log number.
33	4–8	Trailer container	Leave blank.
34	9–14	Consignor commodity abbreviation. Other.	Net weight of explosives for each lot number.
35–42	15–53		Leave blank.
43	54–67	Remarks	Enter ammunition lot numbers; these are required for vessel planning, cargo manifesting, and ammunition movement reporting.
44a	68–71	Pieces	Total pieces by lot number.
44b	72–76	Weight	Total weight in pounds by lot number.
44c	77–80	Cube	Total cube by lot number.

f. Serviceability/Federal Stock Number Entries (fig B–I–5).

DD Form 1384 block no.	Punch card column	Entry	Explanation of data
32	1–3	Document identifier	Entry for vehicles—TV9; for general cargo—TX9.
33	4–8	Trailer container	Leave blank.
34	9–14	Commodity abbreviation	Serviceability: [3] Serviceable—S Unserviceable (economically repairable)—F Unserviceable (uneconomically repairable)—H For disposal—D
		Other.	
35–42	15–53		Leave blank.
43	54–64	Remarks	Show Federal stock number of item.
44	68–80	Additional remarks	Enter nomenclature.

[3] Serviceability is determined by the shipping agency.

B–5. Distribution of the TCMD

The TCMD must be prepared in sufficient copies to permit a distribution that assures control and accountability of the shipment until it is receipted for at its first destination. Certain basic distribution is mandatory in all cases, after which local policy may prescribe additional distribution as desired. The mandatory distribution of the TCMD includes:

a. An advance copy goes directly to the consignee. If the time element requires, this information may be given by telephone or other rapid means of communication, with the printed copy following as soon as possible.

b. In the case of shipment of a release unit, a copy goes to the movement control authority.

c. One copy is retained in the suspense file of the document originator.

d. Three copies accompany the mode operator for the consignee to receipt. (One copy is receipted and returned by the consignee direct to the document originator for comparison with the suspense copy; one copy is given to the consignee to match with the advance copy; and one copy is retained by the carrier as proof of delivery.)

e. One copy is prepared for customs (if required).

f. One copy is retained by the terminal.

Section III. PREPARATION OF TCMD FOR A UNIT MOVE

B–6. General

Under MILSTAMP procedures, all unit equipment and supplies moving overseas, except items carried by individuals, are controlled by transportation control and movement documents (TCMD's). Equipment and supplies shipped on the same day by the same mode of transportation are listed on one set of TCMD's. Shipments made on different days or by different modes require separate sets of TCMD's. The shipping activity (in this case, the unit making the move) is responsible for preparing the TCMD, and the movement control representative assists as needed and checks the completed TCMD to insure its correctness and completeness. This section explains the procedures for completing a TCMD for moving the equipment

of a unit scheduled to move from Saigon, Vietnam, to the Military Ocean Terminal, Bay Area (MOTBA), Oakland, California, for further movement to Fort Eustis, Virginia. (Unit personnel will move by air.) For an actual movement refer to MILSTAMP to assure that procedures, codes, and formats used are up to date.

B–7. Heading of the TCMD

For unit moves, the heading of the TCMD shows only general information as discussed below, using those entries that pertain to the entire shipment. (For an example of a TCMD heading for a unit move, see figure B–I–9.) All data elements must be coded, but entries 3, 4, 6, 7, and 11 may also be shown in the clear at the option of the preparing activity. Each page is numbered consecutively (page 1 of 4, page 2 of 4, and so on) in the block provided in the top right hand corner of the form and is identified by the transportation control number (TCN) of the first shipment as entered on page 1.

a. Block 1—Document Identifier. Left blank here, but shown in block 32 of the lower portion of the form. (See paragraph B–II–2 for document identifier codes.)

b. Block 2—Trailer Container. Left blank here; used only for CONEX cargo transporters and then entered in block 33 (fig B–I–8③).

c. Block 3—Consignor. RG1 is the code for Saigon. Consignor codes may be obtained from the DOD Activity Address Directory.

d. Block 4—Commodity, Special Handling. "Unit move" is entered here. Commodity and special handling codes are entered in block 35. (See paragraph B–II–4 for commodity and special handling codes.)

e. Block 5—Air Dimensions. Left blank.

f. Block 6—Port of Embarkation. The code for the port of Saigon is RG1. If the move is classified, leave this block blank.

g. Block 7—Port of Debarkation. The code 3DK is for Military Ocean Terminal, Bay Area, Oakland, California. Leave this block blank if the port of debarkation is unknown, or if the movement is classified. (See paragraph B–II–6 for port designators.)

h. Block 8—Mode. The Z is the code for Military Sealift Command contract space. (See paragraph B–II–7 for mode codes.)

i. Block 9—Pack. Left blank here but shown in block 39.

j. Block 10—Transportation Control Number (TCN). The unit assigns each shipment unit a transportation control number. A shipment unit is each vehicle, trailer, mobile gun, aircraft, separate container, carload or truckload of equipment or supplies in the same commodity category, and equipment or supplies that must move together as an assembly or set regardless of the number of conveyances. For unit moves, leave this block blank. Enter the TCN in blocks 21 and 40. (See appendix C for a discussion of the TCN.)

k. Block 11—Consignee. This is the activity address code for the installation that is the unit's ultimate destination in the continental United States. A26TAM is the code for Fort Eustis, Virginia.

l. Block 12—Priority. Transportation priority 3 has been assigned to the move. Priority 3 normally calls for transportation by surface mode. For a unit move, the Military Sealift Command assigns the transportation priority as established by Department of the Army in the movement directives.

m. Block 13—Required Delivery Date. The 323 is the Julian date for 19 November (323d day of the year).

n. Block 14—Project. The VVI is the project code assigned to the movement. A project code is assigned in the movement order.

o. Block 15—Date Shipped. The 307 is the Julian date for 3 November. (Normally this is entered by the transportation officer since the date of shipment is not known by the moving unit.)

p. Block 16—Estimated Time of Arrival (ETA). The entry V is the estimated number of days it will take to move the shipment from the Saigon port to the Oakland port. (See paragraph B–II–11 for ETA codes.)

q. Block 17—Transportation Account Codes (TAC). A205 is the code for troop support cargo via Military Airlift Command or Military Sealift Command. When a special account code is established for unit moves, it is used. (See paragraph B–II–12 for transportation account codes.)

r. Block 18—Carrier. Will be entered at the port.

s. Block 19—Flight-Truck-Voyage Document Number. Will be entered at the port.

t. Block 20—Reference Number. Not used for unit movements.

u. Block 21—Remarks. For unit moves, the TCN of the first shipment unit (package) on page 1 of the TCMD.

v. Blocks 22–31. Not used for unit moves.

B–8. Body of the TCMD

Each piece of the equipment and container to be moved is listed in the body of the TCMD as discussed below and as depicted in figure B–I–8.

a. Block 32—Document Identifier. Paragraph B–II–2 shows how document identifier codes are constructed. In the code TV1, T is for transportation, V for vehicle, and 1 for prime document. Additionally, when the dimension of any piece in the shipment unit exceeds 6 feet in any direction (except CONEX cargo transporters), a separate line entry must be made on the form for each different dimensional exception. Shipment units of Government vehicles, wheeled trailers or guns, or aircraft require special outsize dimensional and identification data. Enter this information on the line immediately following the original shipping unit entry in the body of the form as shown in lines one and two of figure B–I–8. In the code TV5, the 5 indicates outsize dimensions. When an outsize dimension line is required, enter the vehicle model number in block 34. The dimensions are entered in block 43 using a 14-position alphameric group. For example, in block 43, line 2, of figure B–I–8③, the length of the vehicle is 132 inches, width 64 inches, and height 53 inches. Note that five positions are reserved for length, three for width, and three for height. When not all positions are required to indicate dimensions, zeros are entered. Fractions are carried to the next highest whole number. (Dimensions for major items of equipment are contained in TB 55–46–1.)

(1) The two items following the vehicles in figure B–I–8③ are CONEX cargo transporters; the code is TX1. The T is for transportation, the X is for shipments not otherwise covered, and the 1 indicates prime document. Though CONEX cargo transporters exceed 6 feet, dimensional information is not required on the TCMD.

(2) The last item in figure B–I–8③ constitutes tent poles and requires an additional line since the poles exceed 6 feet in length.

b. Block 33—Trailer-Container. Enter here the last five digits of the six-digit serial number on CONEX cargo transporters (para B–II–3). This entry is used for shipments moving in controlled containers and for shipment units consolidated in noncontrolled containers, including palletized unit loads.

c. Block 34—Consignor. The activity address code for the consignor, in this case RG1, is shown in block 3 of the heading and is repeated in block 34 for the first line of the trailer portion of DD Form 1384. On subsequent lines in block 34, the model number of outsize equipment or vehicles is entered.

d. Block 35—Commodity Categories and Special Handling. Paragraph B–11–4 shows codes for commodity categories, type of cargo, and special handling. The first three digits, 870, of the code 870Z6 indicates a ¼-ton utility vehicle, the Z indicates that no special type of cargo code applies, and the 6 indicates an outsize shipment. Note that the code for the remainder of the vehicles after the seven ¼-ton vehicles is 867Z6 except for the third and fourth vehicles in figure B–I–8②. The code for these two 2½-ton trucks is 867Z7. Paragraph B–II–4 shows that the second 7 indicates a heavy lift with outsize dimensions. A heavy lift is defined as 5 or more short tons. Entry 44 in figure B–I–8② shows that each of these items weighs more than 10,000 pounds. For the two CONEX cargo transporters, the code is 741ZZ. Paragraph B–II–4 shows that the first Z indicates that no special type of cargo code is applicable and the second that no exceptional handling is required.

e. Block 36—Air Dimension and POE. Air dimension is used only for air and sealift express shipments. The POE shown in block 6 is repeated here. Paragraph B–II–6 contains sample port designator codes.

f. Block 37—Port of Debarkation (POD). The entry shown in block 7 is repeated here (para B–II–6).

g. Block 38—Mode. The entry shown in block 8 is repeated here (para B–II–7).

h. Block 39—Type Pack. Paragraph B–II–8 shows type of pack codes. Note that VO is for a vehicle in operating condition. Normally, only vehicles in operating condition are shipped in unit moves. Note the code for CONEX containers in this block. As stated in *b* above, the last five digits of the CONEX serial number are shown in block 33; the first digit of the CONEX serial number is shown in block 39, preceded by an X. For example, the serial number of the first CONEX listed is 426784.

i. Block 40—Transportation Control Number

(TCN). The TCN assigned to each item is shown here; the TCN is explained in appendix C to this manual.

j. Block 41—Consignee. The address code for the consignee shown in block 11 is entered in block 41 on the first line only on the first page of the TCMD.

k. Block 42—Priority. Repeated from block 12 of the heading on the first line only on the first page of the TCMD.

l. Block 43—Required Delivery Date, Project, Date Shipped, Estimated Time of Arrival, and Transportation Account Code. These entries are repeated from blocks, 13, 14, 15, 16, and 17 of the heading in the first line of the first page of the TCMD. The second line contains remarks explaining document identifier TV5, outsize dimension, as explained in *a* above. The dimensions are set solid and are shown in inches preceded by the necessary zeros to total five digits followed by L for the length, three digits followed by W for width, and three digits followed by H for height.

m. Block 44—Pieces, Weight, and Cube. The total number of pieces, total weight, and cube for each item shipped are shown here for the TV1 line. Only whole numbers are used. Decimals should be increased to the next whole number; for example, 253.2 is shown as 254. The vehicle service identification number is also shown here on the TV5 line. Each vehicle is identified by USA followed by five numbers and one letter; for example, USA 2J8736. (For vehicles purchased before the present identification system went into effect, the last 13 digits of the identification number are used.)

B-9. Use of the TCMD as an Individual Packing List

Except for vehicles and packages containing a single, easily identifiable item of equipment, a packing list is required for each crate, container, or package. For a package containing only a single item of equipment, the contents are stenciled on the exterior of the package.

a. Except as noted in *c* below and for units deploying under contingency plans or other immediate operational requirements, separate packing lists are prepared for each container shipped by or with the unit.

b. Packing lists are prepared in six copies using DD Form 1384. (Fig B-I-9 shows the TCMD used as a separate packing list.) Copies of the packing list are distributed as follows:

(1) One copy for the moving organization's records.

(2) Two copies to the unit representative at the terminal concerned.

(3) One copy to the installation commander.

(4) Two copies with the package: one is attached to the exterior of the container in a weatherproof envelope, and one is placed inside the container. The outside packing list should not disclose the true contents of packages containing sensitive items, such as drugs, alcohol, and cryptographic equipment. This provision may be further extended to include maps or other material, as considered appropriate by the unit commander.

c. Packing lists are not required for the following:

(1) Unboxed or uncrated equipment, such as vehicles and wheeled artillery. Unit commanders may find it desirable to prepare packing lists for vehicles when they are loaded with other numbered packages.

(2) Packages containing only one item or identical items. On such packages, the contents are marked (stenciled) on the outside.

(3) Unboxed or uncrated equipment of a nature which would obviously not require packing lists for identification; for example, nested cans or banded shovels.

(4) Cryptographic equipment.

ANNEX I TO APPENDIX B

FORMS AND FORMATS

B–I–1.

This annex illustrates the formats used in preparing the transportation control and movement document (TCMD) (DD Form 1384) for the types of movements most commonly encountered in a theater of operations.

B–I–2.

Figure B–I–1 illustrates DD Form 1348–1, source document for the transportation control number. Figures B–I–2 through B–I–7 show how the TCMD is prepared for different types of freight movements. Figures B–I–8 and B–I–9 show preparation of the TCMD for unit equipment and supplies moving overseas. These illustrations should be crossed referenced with appendix B, MILSTAMP, to avoid conflicts when the data requirements or formats are changed.

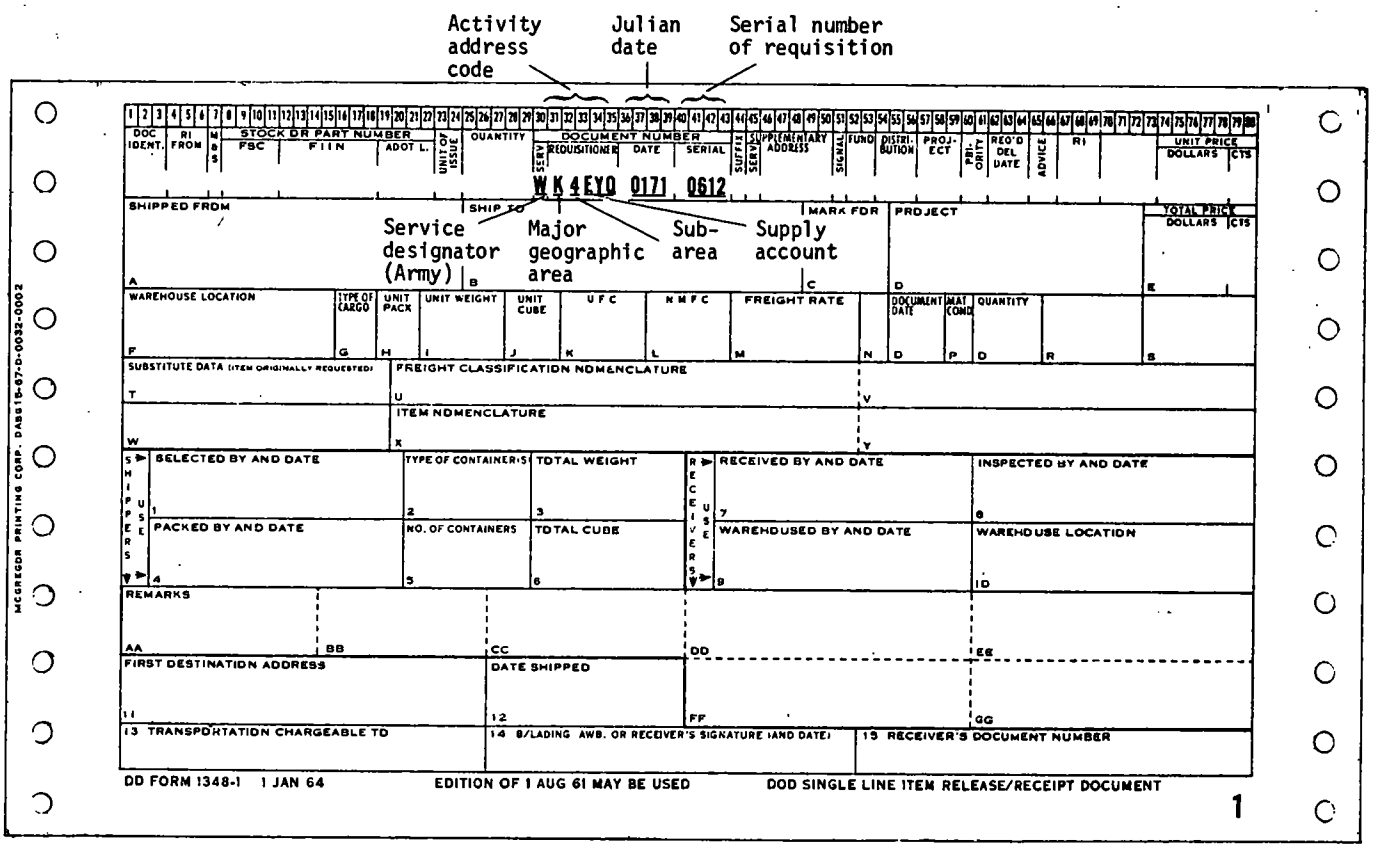
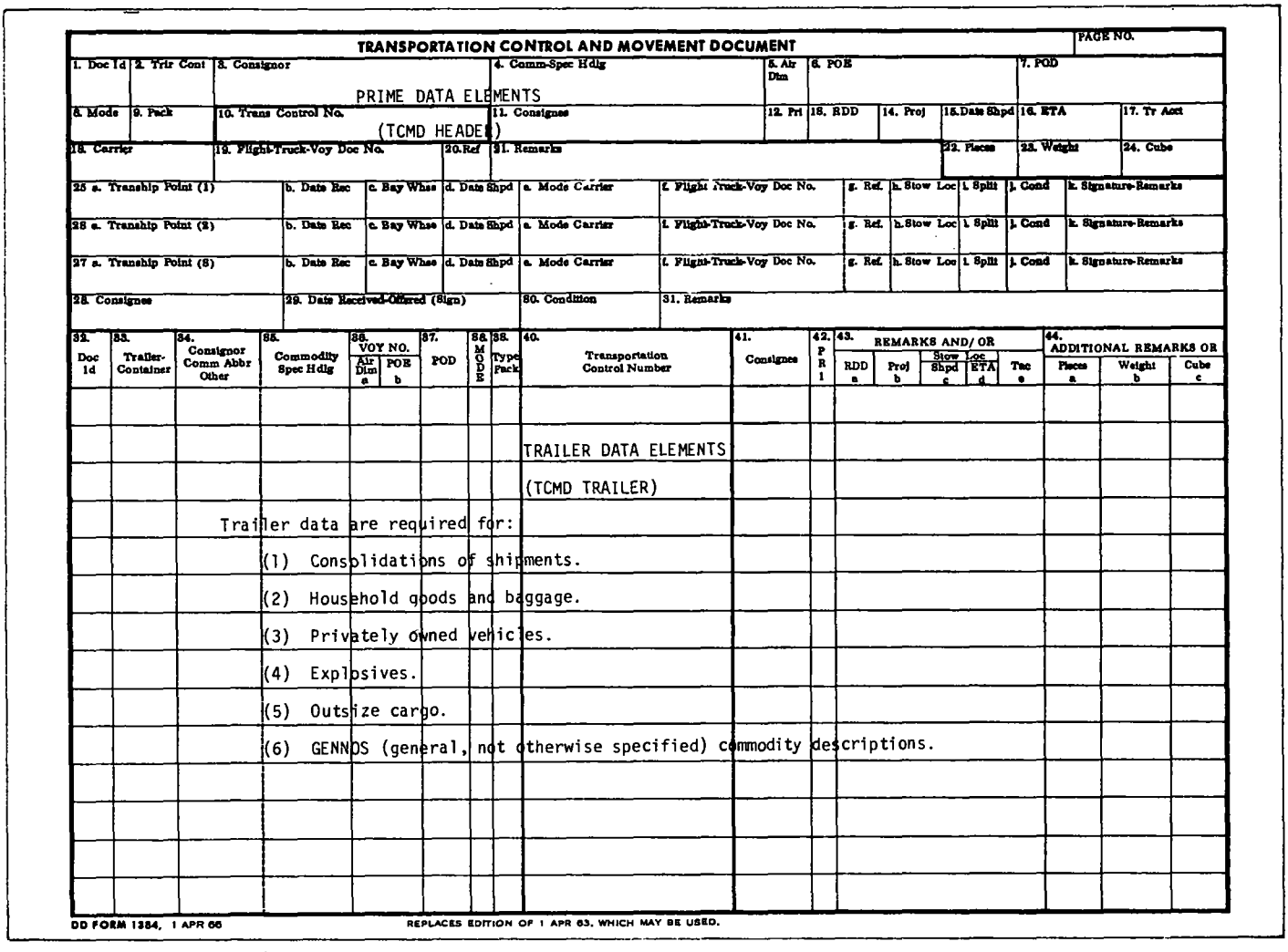


Figure B–I–1. Materiel release order (DD Form 1348–1), which serves as the source document of basic entries on the transportation control and movement document.



TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO.

1. Doc Id	2. Trir Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
		PRIME DATA ELEMENTS				

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
		(TCMD HEADER)							

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube

	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25 a. Tranship Point (1)										
26 a. Tranship Point (2)										
27 a. Tranship Point (3)										

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	38. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
									TRAILER DATA ELEMENTS										
									(TCMD TRAILER)										
		Trailer data are required for:																	
			(1) Consolidations of shipments.																
			(2) Household goods and baggage.																
			(3) Privately owned vehicles.																
			(4) Explosives.																
			(5) Outsize cargo.																
			(6) GENNOS (general, not otherwise specified) commodity descriptions.																

DD FORM 1384, 1 APR 66 — REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: For figures B-I-2 thru B-I-9, refer to appendixes B and C, MILSTAMP, to avoid conflicts when the data requirements or formats are changed.

Figure B–I–2. Transportation control and movement document (DD Form 1384) showing division into prime data and trailer data elements.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO. 1 of 1

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TV1		AT80LB	86427		RG1	UB1

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
1	VE	AT80LB8220X101XXX	AT6508	3		9 AW			A217

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				1	19;000	285

25 a. Transhp Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
USAD, Long Binh										
26 a. Transhp Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Transhp Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks
USAD, Okinawa			

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	38. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD e	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TV1		AT80LB	864Z7	PG1		UB1	I	VE	AT80LB 8220 X101 XXX	AT650B	3	9AW			A217		1	19000	285
TV5		M48 A1										00149L072W102H					USA	71H1234	
TV9		F										FSN 12345671000						Tank CMT	
TV9												Cert IAW AR 740-20							
TV9												MF USAD Okinawa							
TV9												Closed Loop							

DD FORM 1384, 1 APR 66 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure 8-I-2.

Figure B-I-3. Transportation control and movement document for an outsize vehicle.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO. 1 of 1

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TX1	33017	AT80LB	700ZZ		RG1	UB1

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
Z	X2	AT80LB8220X001XXX	AT6508	3	222	9AW			A217

18. Carrier	19. Flight-Truck-Vny Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				1	8,500	365

25 a. Transhp Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cmnd	k. Signature-Remarks
USAD, Long 8inh										
26 a. Transhp Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cmnd	k. Signature-Remarks
27 a. Transhp Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks
USAD, Okinawa			

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TX1	33017	AT80LB	700ZZ	RG1		UB1	Z	X2	AT80LB 8220 X001 XXX	AT 6508	3	222	9AW			A217	1	8500	365
TX9		S										FSN					Small	Bin Misc Items	
TX9												Cert IAW AR 740-20							
TX9	Miscellaneous	entries										Seal 123459							
TX9												M F USAD Okinawa							

DD FORM 1384, 1 APR 68 — REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure B-I-2.

Figure B-I-4. Transportation control and movement document for a single shipment unit and illustrating miscellaneous entries.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO. 1 of 1

1 Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TX2	S0012	AT80LB	590ZZ		RG1	UB1

8. Mode	9. Pack	10. Trans Control No.	11 Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
3	RT	AT80LB8220X500XXX	AT6508	3					A217

18 Carrier	19 Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				1	23,000	2,500

25 a. Transhlp Point (1)	b. Date Rec	c. Say Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
USA0, Long Binh										
26 a. Transhlp Point (2)	b. Date Rec	c. Say Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Transhlp Point (3)	b. Date Rec	c. Say Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks
USA0, Okinawa			

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36 VOY NO Air Dln a	36 VOY NO POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TX2	S0012	AT80LB	590ZZ	RG1		UB1	3	RT	AT80LB 8220 X500 XXX	AT6508	3				A217		1	23000 ~~10500~~	2550 ~~2250~~
TX3												00156L072W096H					1	(EMTY WEIGHT)	
TX9												Cert IAW AR 740-20							
TX9												MF USA0 Okinawa							
TX9												Closed Loop							
TX4		AT80LB	586ZZ					BX	AT80LB 8200 1500 XXX	AT6508	3				A217		1	650	100
TX9		F										FSN 10509887700						Transmission	
TX4		AT80LB	586ZZ					BX	AT80LB 8220 1500 XXX	AT6508	3				A217		1	800	200
TX9		F										FSN 10509887800						Transmission	
TX4		AT80LB	590ZZ					CP	AT80LB 8198 0014 XXX	AT6508	3				A217		1	1050	200
TX9		F										FSN 10509602300						Generator	

DD FORM 1384, 1 APR 66 — REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure B-I-2.

Figure B–I–5. Transportation control and movement document for roll-on/roll-off loaded shipment units.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT — PAGE NO. 1 of 1

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TE1		AT80LB	412ZZ		RG1	RGE

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
I	PT	AT80LB81929000XXX	AT8150	3	240				A205

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				30	4,000	690

	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25 a. Tranship Point (1) USAD, Long Binh										
26 a. Tranship Point (2)										
27 a. Tranship Point (3)										

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks
USAD, Cam Ranh			

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TE1		AT80LB	412ZZ	RG1		RGE	I	PT	AT80LB 8192 9000 XXX	AT8150	3	240				A205	30	4000	690
TE6		7600										FSN 12347889100 G123					57MM	HE Shells	
TE7		150										Lot Nr. 0789					15	2500	390
TE7		140										Lot Nr. 0779					15	1500	300
TE9												MF USAD Cam Ranh Bay, RVN							

DD FORM 1384, 1 APR 66 — REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, Figure B-I-2.

Figure B–I–6. Transportation control and movement document for ammunition and explosives.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO 1 of 1

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD
TX2	21697	AT80LB	700ZZ		RG1	3DS

8. Mode	9. Pack	10. Trans Control No.	11. Consignee	12. Pri	13 RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
V	Z3	AT80L89077V101LK2	A45594	3	241	S			A217

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
				42	15126	914

25 a. Transhlp Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
USAO, Cam Ranh										
26 a. Transhlp Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Transhlp Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks
Red River Depot TX			

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Coorol Number	41. Consignee	42. PRI	43. REMARKS AND/ OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TX2	21697	SLND35	700ZZ	RG1		30S	V	Z3	AT80LB 9077 V101 LK2	A45594	3	241	S			A217	42	15126	914
TX9												Seals 35494-35495							
TX9												Cert IAW AR 740-20							
TX9												MF Red River Army Depot TX							
TX4		AT80LB	586ZZ				8X		AT80L8 9037 X219 XXX	A45594	3	241				A217	12	7100	100
TX6		F										FSN 156067059907					Stock Assy		
TX4		AT80LB	586ZZ				8X		AT80L8 9037 X293 XXX	A45594	3	241				A217	6	3026	100
TX6		F										FSN 15607706012					Door Assy		
TX4		AT80L8	586ZZ				BX		AT80LB 9037 X294 XXX	A45594	3	241				A217	24	5000	714
TX6		F										FSN 15607706012					Elevat		

DD FORM 1384, 1 APR 66 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure B-I-2.

Figure B–I–7. Transportation control and movement document for a container shipment.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO. 1 of 3

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE		7. POD	
TV1		RG1 SAIGON	UNIT MOVE		RG1 SAIGON		3D2 OAKLAND	

9. Mode	9. Pack	10 Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	19. ETA	17. Tr Acct
Z	VO	WDBDAA6304Z001XXX	A26TAM	3	323	VVI	307	7	A205

18 Carrier	19. Flight-Truck-Voy Dne No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24 Cube
			WDBDAA G304 Z001 XXX	24	78270	6507

25 a. Transhlp Point (1)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
26 a. Transhlp Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Transhlp Point (3)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	29 Date Received-Offered (Sign)	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr (Inner	35. Commodity Spec Hdlg	36. VOY NO. Air Dim a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD e	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TV1		RG1	870Z6	RG1		3D2	Z	VO	W0B0AA 6304 Z001 XXX	A26TAM	3	323	VVI	307	7	A205	1	2350	254
TV5		M151							WDB0AA 6304 Z001 XXX			00132L064W053H					USA	2J8736	
TV1			870Z6					VO	W0B0AA 6304 Z002 XXX								1	2350	254
TV5		M151							W0BDAA 6304 Z002 XXX			00132L064W053H					USA	204732	
TV1			870Z6					VO	W0BDAA 6304 Z003 XXX								1	2350	254
TV5		M151							WDB0AA 6304 Z003 XXX			00132L064W053H					USA	2L7311	
TV1			870Z6					VO	W0B0AA 6304 Z004 XXX								1	2350	254
TV5		M151							WDBDAA 6304 Z004 XXX			00132L064W053H					USA	2J8742	
TV1			870Z6					VO	WDBDAA 6304 Z005 XXX								1	2350	254
TV5		M151							WDBDAA 6304 Z005 XXX			00132L064W053H					USA	2G5176	
TV1			870Z6					VO	WDBDAA 6304 Z006 XXX								1	2350	254
TV5		M151							WDBDAA 6304 Z006 XXX			00132L064W053H					USA	2H6170	
TV1			870Z6					VO	W0B0AA 6304 Z007 XXX								1	2350	254
TV5		M151							WD3DAA 6304 Z007 XXX			00132L064W053H					USA	2N4275	

DD FORM 1384, 1 APR 66 REPLACES EDITION OF 1 APR 65, WHICH MAY BE USED.

NOTE: See footnote B-I-2.

Figure B-I-8 ①. Transportation control and movement document for a unit move from an oversea theater, page 1.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO. 2 of 3

1. Doc Id	2. Trlr Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD

8. Mode	9. Pack	10. Trans Control No.	11 Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct

18. Carrier	19. Flight-Truck-Voy Doc No.	20 Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
			WOBOAA 6304 Z001 XXX			

25 a. Transhp Point (1)	b. Date Rec	c. Bay Whse	d Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
26 a. Transhp Point (2)	b. Date Rec	c. Bay Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
27 a. Transhp Point (3)	b. Date Rec	c. Bay Whse	d Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

28. Consignee	29. Date Received-Offered (Sign)	30 Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36 VOY NO Air Dim a	36 VOY NO POE b	37. POD	38. MODE	39 Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/ DR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS DR Pieces a	Weight b	Cube c
TV1			867Z6					VO	WOBOAA 6304 Z008 XXX								1	5660	522
TV5		M37B1							WOBOAA 6304 Z008 XXX			001B6L076W065H					USA	3C7216	
TV1			B67Z6					VO	WOBOAA 6304 Z009 XXX								1	58B0	535
TV5		M37B1WW							WOBOAA 6304 Z009 XXX			00191L076W065H					USA	309421	
TV1			867Z7					VO	WOBOAA 6304 Z010 XXX								1	11775	1092
TV5		M34							WOBOAA 6304 Z010 XXX			00262L0B8W082H					USA	4C7711	
TV1			867Z7					VO	WOBDAA 6304 Z011 XXX								1	13700	1235
TV5		M35A2WW							WOBOAA 6304 Z011 XXX			00279L096W0B0H					USA	4A7222	
TV1			867Z6					VO	WOBOAA 6304 Z012 XXX								1	580	170
TV5		M416							WOBOAA 6304 Z012 XXX			00109L062W044H					USA	6N4726	
TV1			867Z6					VO	WOBOAA 6304 Z013 XXX								1	580	170
TV5		M416							WOBOAA 6304 Z013 XXX			00109L062W044H					USA	6N7931	
TV1			867Z6					VO	WOBOAA 6304 Z014 XXX								1	580	170
TV5		M416							WOBOAA 6304 Z014 XXX			00109L062W044H					USA	6M7241	

DD FORM 1384, 1 APR 66 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure B-I-2.

Figure B-I-8 ②. Transportation control and movement document for a unit move from an oversea theater, page 2.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO. 3 of 3

1. Doc Id	2. Trir Cont	3. Consignor	4. Comm-Spec Hdlg	5. Air Dim	6. POE	7. POD

8 Mode	9. Pack	10 Trans Control No.	11. Consignee	12. Pri	13 RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct

18. Carrier	19 Flight-Truck-Voy Doc No.	20 Ref	21. Remarks	22. Pieces	23. Weight	24. Cube
			WDBOAA 6304 Z001 XXX			

25 a. Transhlp Point (1)	b. Date Rec	c. Bay Whse	d Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k Signature-Remarks

26 a. Transhlp Point (2)	b Date Rec	c. Bay Whse	d Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks

27 a. Transhlp Point (3)	b. Date Rec	c. Bay Whse	d Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref	h. Stow Loc	i. Split	j. Cond	k Signature-Remarks

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31 Remarks

32 Doc Id	33. Trailer-Container	34 Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36 VOY NO. Air Dim a	36 VOY NO. POE b	37. POD	38 MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42 PRI	43. REMARKS AND/ OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44 ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
TV1			867Z6					V0	WDBOAA 6304 Z015 XXX								1	1340	313
TV5		M101							WOBOAA 6304 Z015 XXX			00147L074W050H					USA	6M4711	
TV1			867Z6					V0	WOBOAA 6304 Z016 XXX								1	1340	313
TV5		M101							WDBOAA 6304 Z016 XXX			00147L074W050H					USA	6N1731	
TV1			867Z6					V0	WDBOAA 6304 Z017 XXX								1	2670	439
TV5		M105A2							WOBOAA 6304 Z017 XXX			00166L083W055H					USA	6P4320	
TX1	26784		741ZZ					X4	WDBDAA 6304 Z018 XXX								1	8375	365
TX1	21752		741ZZ					X6	WOBDAA 6304 Z019 XXX								1	7900	365
TX1			741Z6					B0	WOBOAA 6304 Z020 XXX								5	1500	40
TX5									WOBOAA 6304 Z020 XXX			00120L024W020H							

DD FORM 1384, 1 APR 66 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure B-I-2.

Figure B–I–8③. Transportation control and movement document for a unit move from an oversea theater, page 3.

TRANSPORTATION CONTROL AND MOVEMENT DOCUMENT PAGE NO

1. Doc Id	2. Trir Cont	3. Consigoor	4. Comm-Spec Hdlg	5 Air Dim	6. POE	7. POD
		Co. B, 14th T. Bn, Saigon				

8 Mode	9 Pack	10. Trans Control No.	11. Consignee	12. Pri	13. RDD	14. Proj	15. Date Shpd	16. ETA	17. Tr Acct
	CONEX	ADBDAA 6304 Z001 XXX							

18. Carrier	19. Flight-Truck-Voy Doc No.	20. Ref	21. Remarks	22. Pieces	23. Weight	24 Cube
	CONEX #225473		PACKING LIST 1 July 1967	1	9000	365

	b. Date Rec	c. Say Whse	d. Date Shpd	e. Mode Carrier	f. Flight-Truck-Voy Doc No.	g. Ref.	h. Stow Loc	i. Split	j. Cond	k. Signature-Remarks
25 a. Transhp Point (1)										
26 a. Transhp Point (2)										
27 a. Transhp Point (3)										

28. Consignee	29. Date Received-Offered (Sign)	30. Condition	31. Remarks

32. Doc Id	33. Trailer-Container	34. Consignor Comm Abbr Other	35. Commodity Spec Hdlg	36. VOY NO. Air Dlm a	36. VOY NO. POE b	37. POD	38. MODE	39. Type Pack	40. Transportation Control Number	41. Consignee	42. PRI	43. REMARKS AND/OR RDD a	Proj b	Stow Loc Shpd c	Stow Loc ETA d	Tac e	44. ADDITIONAL REMARKS OR Pieces a	Weight b	Cube c
		FSN		NOMENCLATURE						QUANTITY		LINE ITEM IDENTIFICATION							
		INSERT		SEE ATTACHED PACKING LIST													1	375	36
		INSERT		EXPENDABLES													1	650	36
		INSERT		SEE ATTACHED PACKING LIST													1	290	36
		INSERT		SEE ATTACHED PACKING LIST													1	423	36
	4610-268-9890			BAG, CANVAS, WATER						1	ea	503-10200					5	33	2
	6230-299-2077			LIGHT SET, GEN ILLUM						1	ea	249-07600					3	978	42
	8340-254-5331			TENT, WALL, SMALL						1	ea	590-63500					1	50	5
		UNACCOMPANIED BAGGAGE																	
		GREEN, JOSEPH P.		CPT 132-20-8840								BAG, DUFFLE					1	63	4
		SMITH, JOHN W.,		SGT. RA 308-07-7331								BAG, DUFFLE					1	65	4
		JONES, DEXTER O.		CPL. RA 164-93-0656								BAG, DUFFLE					1	75	4

DD FORM 1384, 1 APR 66 REPLACES EDITION OF 1 APR 63, WHICH MAY BE USED.

NOTE: See footnote, figure B-I-2.

Figure B–I–9. Transportation control and movement document used as a separate packing list.

ANNEX II TO APPENDIX B

CODES

B–II–1. General

This annex illustrates the use of codes in preparing the transportation control and movement document (TCMD) (DD Form 1384) for the types of movements most commonly encountered in a theater of operations. Codes published in MILSTAMP are subject to change; hence reference must be made to MILSTAMP in the actual preparation of the TCMD. In the field, however, MILSTAMP (and current changes thereto) may not always be available at the working level. When this is the case the command may extract applicable portions of MILSTAMP for appropriate distribution. Care must be exercised to assure that information is up to date.

B–II–2. Document Identifier Codes

a. The document identifier code (DIC) is entered in blocks 1 and 32 of the TCMD. The DIC is an alphameric code (made up of a combination of letters and digits) that identifies the general nature of the cargo. It consists of three spaces and is mandatory on all MILSTAMP documentation. MILSTAMP prescribes DIC codes for both MILSTRIP and non-MILSTRIP shipments. The DIC is constructed as shown below:

(1) The first character is always T.

(2) The second character represents the type of shipment as illustrated in the following selected examples:

E for ammunition and explosives
J for dangerous articles (except ammunition and explosives)
V for government vehicles, wheeled trailers or guns, or aircraft
X for shipments not otherwise covered in appendix B1, MILSTAMP

(3) The third character provides prime and trailer identification for each type of shipment. It may be selected from one of three categories, depending upon the type of document as indicated below:

Advance TCMD documents	*Air manifest documents*	*Water manifest documents*	
1	A	J	Single shipment unit prime document
2	B	K	Prime document for roll-on/roll-off trainer, SEAVAN, or air cargo pallet
3	C	L	Prime document for the consolidation of multiple shipment units into a single container (for example, CONEX, unitized pallet load, etc.)
4	D	M	Singe shipment unit prime document when consolidated into container, unitized pallet load, roll-on/roll-off trailer, or SEAVAN
5	E	N	Outsize dimensions trailer data
6	F	O	Ammunition, explosives, and other dangerous articles, nomenclature trailer data
7	G	P	Ammunition lot number trailer data
8	H	Q	Personal property ownership data trailer data
9	I	R	Miscellaneous information trailer data

b. The following examples of DIC's include those which experience in an active theater has shown to be most frequently used:

TE1—ammunition and explosives prime entry
TJ1—dangerous other than ammunition or explosives prime entry
TV1—vehicle prime entry
TX1—shipments other than above prime entry (for example, general cargo)
TX2—prime entry for SEAVAN or roll-on/roll-off trailer
TX3—prime entry for consolidations, CONEX, pallets
TX4—shipment unit prime entry on RORO or SEAVAN
TV5—vehicle outsize dimension and identification entry
T_5 [a]—dimension entry (other than vehicles) for any piece over 6 feet in any dimension except CONEX and SEAVAN
T_6 [a]—nomenclature entry for ammunition, explosives, and other dangerous shipments
TE7—lot number entry for ammunition and explosives
T_8—Personal property ownership data trailer data
T_9 [a]—description and/or miscellaneous information entry

[a] The second position for these DIC's is the same as for the prime header entry on the TCMD.

B–II–3. Trailer/Container Number

The trailer/container number, which is printed or stamped on the CONEX, roll-on/roll-off trailer, or SEAVAN, is entered in blocks 2 and 33 of the TCMD. The information shown below is extracted from appendix B2 of MILSTAMP.

a. Controlled Containers (CONEX).

Serial No.	*Serial No. field block 33*	*Type package block 39 (see also para B–II–8)*
00001–99999	00001–99999	XO
100000–199999	00000–99999	X1
200000–299999	00000–99999	X2
300000–399999	00000–99999	X3
400000–499999	00000–99999	X4
500000–599999	00000–99999	X5
600000–699999	00000–99999	X6
700000–799999	00000–99999	X7
800000–899999	00000–99999	X8
900000–999999	00000–99999	X9

b. Control Number for Roll-On/Roll-Off Vehicles.

(1) *First digit:*

Code	*Description*
S	Stake and platform type trailer
V	Van type semitrailer

(2) *Second to fifth digits:*

Code	*Description*
0001–9999	Last four digits of control number (not USA) printed on vehicle.

c. Control Number for the SEAVAN. The first through the fifth digit is the serial number assigned by the SEAVAN owner and is painted on the container.

B–II–4. Commodity Codes

To determine the commodity code, first compare the nomenclature entered in block X of DD Form 1348–1 with the description and codes shown below; then select the code that is most comparable with the shipment unit description and enter it in blocks 4 and 35 of the TCMD.

a. Air Shipment Code Construction (refer to appendix B3, MILSTAMP). The air shipment code consists of two positions:

(1) The first position indicates the commodity:
A—supplies and equipment for aircraft and aerial targets (includes spare parts of engines
B—construction material
E—engineer supplies except construction material
F—fuels and lubricants except noxious gases
H—signal items
K—clothing, parachutes, fabrics, leather
M—medical supplies
P—photographic supplies and equipment
R—rations and subsistence supplies
V—vehicles, machine shop equipment, tools
W—weapons

(2) The second position specifies handling requirements:
D—dangerous material except special weapons and components
E—aircraft engines
F—foodstuffs requiring normal refrigeration
H—hazardous material (includes only special weapons and components)
P—cargo requiring protection from freezing
S—sets or systems that must move together
W—cargo other than listed above requiring normal refrigeration
X—cargo other than listed above requiring subnormal refrigeration
Y—cargo other than above, including pilferable, requiring hand-to-hand receipt and/or security precautions
Z—no special handling required

b. Surface Commodity/Exception Codes (refer to appendix B4, MILSTAMP). The surface commodity/exception code is either an alpha abbreviation or an alphameric code. The alphameric code consists of five characters: the first three (numbers) indicating cargo class, the fourth (a letter) indicating type of cargo, and the fifth (a number) indicating exception handling requirements. When the TCMD is prepared manually, the alpha code for cargo class is used. Use of the alphameric code is required when the punchcard version of the TCMD is used since the alpha abbreviation would exceed the number of spaces allocated on the punchcard for this entry. The surface commodity/exception codes, shown below, are entered in blocks 4 and 35 of the TCMD. The classes of cargo to which the alpha abbreviations and the first three characters of the alphameric code apply are shown in (1) and (2) below. The types of cargo indicated by the fourth character of the alphameric code are shown in (3) below, and the exception handling indicated by the fifth character is shown in (4) below.

(1) *Cargo other than ammunition, explosives, and bulk petroleum.*

Alpha abbreviation	*Numeric code*	*Description*
ACFUBX	900	Aircraft, unboxed
ACFTTK	670	Aircraft wing and belly tanks
AFTPTS	671	Aircraft parts
AENGFC	672	Aircraft engines
ALUMAT	661	Aluminum matting
AUTOPT	581	Automobile parts, not otherwise specified, new
ASPHLT	607	Asphalt
BATTRY	582	Batteries and parts
BARBWR	664	Barbed wire
WIRECN	769	Concertina wire
CHLNOS	135	Chill (other than subsistence)
CNXMTY	690	CONEX, empty
CONMTY	691	Containers, other than CONEX, empty
CEMCON	660	Cement, construction
CHEMLC	635	Chemicals
CYLCMP	634	Cylinders
CMPDIN	663	Compound, insulating
POLDRM	606	Empty POL drums (including gasoline drums)
FRZNOS	195	Freeze (other than subsistence)
GENATR	590	Generators

Alpha abbreviation	*Numeric code*	*Description*
GNWNOS	816	Guns, weapons, unboxed, wheeled
GENNOS	700	General cargo not otherwise specified
GAS14	604	Gasoline in 10–14 cubic foot drums
LUBGRS	600	Grease, lubricating
INSECT	630	Insecticides, fumigants
INTNOS	631	Insecticides, not otherwise specified
PLYWD	560	Lumber, plywood
WALBRD	561	Lumber, wallboard
LOGTRT	832	Logs, poles, and piling, treated
LOGUTR	835	Logs, poles, and piling, untreated
LMTRTH	841	Lumber, treated, hardwood
LMTRS	844	Lumber, treated, softwood
LMUNTH	847	Lumber, untreated, hardwood
LMUNTS	850	Lumber, untreated, softwood
LTRFLD	601	Lighter fluid
MEDNOS	534	Medical supplies
MCHNRY	853	Machinery, not otherwise specified
METNOS	855	Metal and metal products, not otherwise specified
MCHPTS	592	Machinery parts, not otherwise specified
PPOSAC	613	Mail, sacked
PPOUNS	614	Mail, unsacked
OIL14	602	Oil, lubricating, in 10–14 cubic foot drums
PAINT	620	Paints, in containers less than 10 cubic feet
PNTOTH	621	Paints, other
POLEPK	770	Poles, pickets
ROROMPT	888	Roll-on/roll-off, empty trailers
SANDBG	771	Sandbags
STLMAT	662	Steel matting
IRNNOS	825	Steel, structural, not otherwise specified
AMMOSA	680	Small arms ammunition
SMLARM	681	Firearms (small arms)
SMLARP	682	Small arms parts
SPCNOS	800	Special, not otherwise specified
SUBCHL	130	Subsistence, chill
SUBFRZ	192	Subsistence, freeze
SUBNOS	500	Subsistence, not otherwise specified
TIRES	584	Tires, tubes
TKCMBT	864	Tanks, combat
VEHMIL	867	Vehicles, military; trucks; trailers not exceeding 2½-ton capacity
VEHMUT	870	Vehicles, military, ¼-ton, utility
HLFTRK	873	Vehicles, military, half-tracked
VHTRAK	876	Vehicles, military, tracked
VEHMLO	882	Vehicle, military; truck; trailer exceeding 2½-to capacity
VERRDC	885	Vehicle, road construction
VEHMHE	891	Vehicle, designed for materials handling
VEHNOS	894	Vehicles, not otherwise specified
VEHPTS	586	Vehicle parts, not otherwise specified

(2) *Ammunition, explosives, and other hazardous items* (refer to appendix B4, MILSTAMP) Table B–II–1 at the end of this annex explains the Coast Guard classes indicated below. It also shows the compatibility of various classes of military explosives and hazardous munitions. It is an extract of CG 108, and is intended only as a guide. For detailed information, refer to paragraph 146.29–100, CG 108, US Coast Guard Rules and Regulations for Military Explosives and Hazardous Munitions.

Alpha code	*Numeric code*	*Coast Guard class*
FUZDET	400	(I) ICC Class C. Does not include small arms ammunition (code 680 in (1) above)
BLKEXP	401	(II–A)
SKLPOW	402	(II–B)
FIREWK	403	(II–C)
CMLWP	404	(II–D)

Alpha code	*Numeric code*	*Coast Guard class*
CMLHG	405	(II-E)
CMLFS	406	(II-F)
CMLGEL	407	(II-G)
CMLWAC	408	(II-H)
CMLTH	409	(II-J)
FUXPD	411	(III)
FXAMEX	412	(IV)
SHLEXD	414	(V)
BDFUZ	415	(VI)
SHLHE	416	(VII)
CAPFUZ	417	(VIII)
EXPBLK	420	(IX-A)
HIEXPL	421	(IX-B)
PREXBK	422	(IX-C)
EXBOMB	423	(X-A)
EXBMFZ	425	(X-B)
MSLSHE	427	(X-C)
MSLLHE	428	(X-D)
CMLXX	430	(XI-A)
CMLNON	431	(XI-B)
FULMSL	432	(XI-C)
OXMSL	433	(XI-D)
HAZNOS	436	All other explosives
ACIDIC	450	Acids, liquid, corrosive
ACFUBX	900	Aircraft, unboxed

(3) Fourth position—type of cargo

Code	*Type of cargo*
A	Radioactive materials (radioactive label)
B	Mixed hazardous materials—consolidated only as authorized by USCG regulations, Title 46 CFR (DIC T-2 or T-3 only)
C	Concurrent household goods or privately owned vehicle
D	Contaminated cargo (not including any hazardous materials)
E	Empty hazardous materials containers or packaging (empty label)
F	Explosives, class C
G	Nonflammable compressed gas (green label)
H	Subject to damage from heat
I	Explosives, class A
J	Explosives, class B
K	Spontaneously combustible materials (red label)
L	Water reactive materials (red label)
M	Magnetic material
N	Exempt hazardous materials (no label required)
O	Flammable compressed gases (red gas label)
P	Poison, class B (poison label)
Q	Subject to damage from freezing
R	Flammable liquids (red label)
S	Poisons, class A (poison gas label)
T	Tear gases, class C (tear gas label)
U	Combustible liquids
V	Hazardous articles (CFR 46, 146.27)
W	Corrosive liquids or solids (white label)
X	Flammable solids (yellow label)
Y	Oxidizing materials (yellow label)
Z	No special type of cargo code applicable

(4) Fifth position: special handling

Type special handling cargo	Single handling condition (a)	Mixed handling requirements (Column a plus b, c, or d)		
		Heavy lift (HL) (b)	Outsize dimensions (OD) (c)	HL&OD (d)
Not to be assigned	1	---	---	---
Classified	2	B	K	S
Reserved	3	C	L	T
Protected (sensitive)	4	D	M	U
Protected (pilferable)	5	E	N	V

Type special handling cargo	Single handling condition (a)	Mixed handling requirements (Column a plus b, c, or d)		
		Heavy lift (HL) (b)	Outsize dimensions (OD) (c)	HL&OD (d)
Protected (controlled)	6	F	O	W
Unassigned	7	G	P	X
Unassigned	8	H	Q	Y
No special handling type except as indicated by I, R, or Z.	9	I	R	Z

B–II–5. Air Dimension Code (Appendix B5, MILSTAMP)

To select the air dimension code, first determine the aircraft with the smallest dimension that will accommodate the shipment unit, then select the code for that aircraft as shown below. The code is entered in blocks 5 and 36a of the TCMD.

Code	*Description (in order of door size smallest to largest, with unassigned letters retained for future aircraft)*
A	No restrictions
B	C46, C47, C7A
C	Unassigned
D	Unassigned

Notes:

1. Classified and protected cargo, including protected cargo in accordance with existing regulations, is cargo requiring protected stowage such as cargo of unusual value, medical supplies, and other cargo which, due to circumstances at a particular time, requires special handling. Continuous hand-to-hand receipt is required for classified cargo.
2. Heavy lift is 5 short tons or more; applies to any piece, package, or palletized, unitized, or containerized unit.
3. Dimensions of any piece, package, or palletized, unitized, or containerized unit which exceeds 6 feet in any dimension (excluding CONEXes and privately owned vehicles). The appropriate trailer entry will be used to indicate actual dimensions in inches.

Code	*Description (in order of door size smallest to largest, with unassigned letters retained for future aircraft)*
E	C54, R5D, DC4, C121, R7Y, L1049
F	C118, R6D, DC–6, DC–7, C–97
G	Unassigned
H	Unassigned
J	Unassigned
K	Unassigned
L	Unassigned
M	CL44, AW650, C119, C123
N	Unassigned
P	B707, DC8, DC9, C135, L–188, B727, B737
Q	C130, L100–20, L100–30, L382
R	C141
S	C5
T	B747, DC 10
U	C124
V	Unassigned
W	C133
X	Unassigned
Y	Unassigned
Z	ACA computes[1]

[1]Dimensions outside limits of chart. Air clearance authority computes and provides appropriate code.

B–II–6. Port Designator Code

The port designator code is determined from the shipping instructions. The port of embarkation (POE) code is entered in blocks 6 and 36b and the port of debarkation (POD) code in blocks 7 and 37 of the TCMD. It is not possible to provide a complete listing of port designator codes in this manual. Further, they are subject to frequent change. Therefore, sample codes, illustrating their construction are shown below. For the complete listing, refer to appendix B13B, MILSTAMP.

a. Sample Water Port Designator Code.

999—Discharge/load at sea
United States
1GL—New York
3DK—Oakland (MOTBA)
Thailand area
RA1—Bangkok
Taiwan area
RJ1—Chilung (Keelung)
Philippines
SA1—Manila
Marianas area
TA1—Apra Harbor (Guam)
Ryukyu Islands area
UB2—Buckner Bay, Okinawa
Vietnam
RG1—Saigon
Netherlands area
JG2—Amsterdam
Belgium area
JH1—Zeebrugge
Korea
UC2—Inchon
Germany area
JF1—Bremerhaven

b. Sample Air Terminal Identifier Codes (refer to appendix B13A, MILSTAMP).

Code	Airport
NGZ	Alameda Naval Air Station, California
DAD	Da Nang, Vietnam
HHN	Hahn Air Base, Germany

B–II–7. Mode of Shipment Code (refer to appendix B6, MILSTAMP)

Selection of the mode of shipment code is based upon the shipping instructions. The code is entered in blocks 8 and 38 of the TCMD.

Code	*Description*
F	Military Airlift Command
I	Government truck, including common service
V	SEAVAN service
Y	Intratheater airlift
Z	Military Sealift Command (controlled/contract/arranged space)
2	Government watercraft (barge, LCU, LCM)
3	Roll-on/roll-off
K	Rail, carload
L	Rail, less than carload
N	LOGAIR
O	Organic military air
W	Water, river, lake, coastal (commercial)

B–II–8. Type Pack Code (Appendix B7, MILSTAMP)

The type pack code indicates the type of package in which the shipment unit is contained. This code is entered in blocks 9 and 39 of the TCMD.

BD—bundle
BE—bale
BX—box
CO—container, other than CW or X
CR—crate
CW—container, commercial highway (not SEAVAN)
DR—drum
LS—loose (not packaged)
M—mixed (more than one type of shipping container)
PC—piece
PT—palletized unit load
RL—reel
RT—roll-on/roll-off trailer
SD—skid
SB—skid box
VE—vehicle
VO—vehicle in operating condition
X—container, CONEX (to be assigned as follows based on CONEX serial number (para B–II–3 above)):
X0—00001 to 99999
X1—100000 to 199999
X2—200000 to 299999

X3—300000 to 399999
X4—400000 to 499999
X5—500000 to 599999
X6—600000 to 699999
X7—700000 to 799999
X8—800000 to 899999
X9—900000 to 999999
Z—commercial SEAVAN:
ZB—loaded to capacity by military terminal
ZC—loaded to capacity by military shipping activity
Z3—loaded to less than capacity by military shipping activity

B–II–9. Transportation Control Number (refer to appendix B8, MIL-STAMP)

The transportation control number (TCN) entered in blocks 10 and 40 of the TCMD permits identification and location of a shipment unit all the way through the movements system. Remember that the TCN always contains seventeen characters. A detailed discussion of the TCN is contained in appendix C.

B–II–10. Hour Codes for Air Shipment (refer to appendix B11, MIL-STAMP)

This code is entered in blocks 15 and 43c of the TCMD. It is used by the shipper to advise of the anticipated time of release of the shipment to the origin carrier and before which challenge action must be received by the shipper. The first position of the date shipped field indicates the appropriate hour code as listed below. The second and third positions indicate the last two digits of the Julian day. The hour code is also applied by air terminals in conjunction with the Julian day to indicate receipt and lift times. All times are shown as Greenwich mean time (GMT) (ZULU TIME). For example, a shipment released at 1530Z on Julian day 223 is coded R23. The hour codes are identified below:

GMT	*Code*	*GMT*	*Code*
0001–0100	A	1201–1300	N
0101–0200	B	1301–1400	P
0201–0300	C	1401–1500	Q
0301–0400	D	1501–1600	R
0401–0500	E	1601–1700	S
0501–0600	F	1701–1800	T
0601–0700	G	1801–1900	U
0701–0800	H	1901–2000	V
0801–0900	J	2001–2100	W
0901–1000	K	2101–2200	X
1001–1100	L	2201–2300	Y
1101–1200	M	2301–2400	Z

B–II–11. Estimated Time of Arrival Code (refer to appendix B10, MIL-STAMP)

The estimated time of arrival code (ETA) is used to identify the number of days in transit from the consignor to the air or surface POE and to establish an ETA date based on the date of shipment. The code is entered in blocks 16 and 43d of the TCMD.

Estimated number of days in transit	*Code*	*Estimated number of days in transit*	*Code*
Same day delivery	0	17	H
1	1	18	J
2	2	19	K
3	3	20	L
4	4	21	M
5	5	22	N
6	6	23	P
7	7	24	Q
8	8	25	R
9	9	26	S
10	A	27	T
11	B	28	U
12	C	29	V
13	D	30–35	W
14	E	36–40	X
15	F	41–50	Y
16	G	Over 50	Z

B–II–12. Transportation Account Code

The transportation account code identifies the funds against which costs are charged by the appropriate fiscal accounting agency. The most applicable description is selected and the corresponding account code entered in blocks 17 and 43e of the TCMD. Sample codes are shown below. A complete list is contained in appendix B12, MILSTAMP.

Description	*Sample transportation account codes*
Transportation of troop support cargo via MAC or MSC	A205
Transportation of APO mail via MSC	A208
Transportation of AAFES cargo via MAC or MSC	A209
Transportation of AAFMPS cargo via MAC or MSC	A210
Transportation of empty CONEXes via MAC or MSC	A211
Transportation of cargo consigned to the US military mission via MAC or MSC	A213
Transportation of surplus and salvage material via MAC or MSC (includes retrograde shipments)	A217
Transportation of courier mail via MSC	A220
Transportation of special service activity cargo via MAC or MSC	A237
Transportation of American Red Cross cargo via MAC or MSC	A238

B–II–13. Dangerous Articles Classification Abbreviation

The following abbreviations [2] are listed for use in MILSTAMP documentation for dangerous articles. When appropriate, the six-character abbreviation is shown in column 34 of the TCMD.

Abbreviation	*Dangerous articles classification*
FLMLIQ	Flammable liquid
FLMSOL	Flammable solid
OXYMAT	Oxidizing materiel
CORLIQ	Corrosive liquid
NFLMGS	Nonflammable compressed gas
FLMGAS	Flammable compressed gas
POISXA	Poison gas or liquid, class A
POISXB	Poisonous liquid or solid, class B
POISXC	Tear gas, class C
RADMAT	Radioactive materiel
COMLIQ	Combustible liquid
HAZARD	Hazardous articles

B–II–14. Exceptions to Consolidation

The following elaborates upon exceptions to consolidation of shipments as discussed in paragraph B–1*f*(4).

[2] Extracted from DOD Regulation 4500.32–R.

a. Physical Configuration. Consolidation will not be accomplished when the physical configuration of an item renders it incompatible for packing in the same container with other items to be shipped to the same destination.

b. Explosives and Other Dangerous Articles. Multiple supply line items of class A, B, or C explosives will not be consolidated into a single shipment unit. Other dangerous articles may be consolidated into the same shipment unit if authorized by the appropriate regulatory authority and as specified in chapter 8 of MILSTAMP. Consolidation of multiple shipment units into CONEXes or other containers, palletized unit loads, and roll-on/roll-off trailers is authorized to the extent permitted by appropriate regulatory authority.[3]

c. Excess Dimension Materiel. Materiel such as missiles, engines, and large spares or assemblies for an item of equipment subject to special handling will not be consolidated in the same shipment unit with other line items.

d. Radioactive or Magnetic Materiel. Radioactive or magnetic materiel will not be consolidated.

e. Project Materiel. Materiel identified by a project code will not be consolidated into shipment units with materiel having a different project code or with nonproject materiel.

f. Economically Infeasible. Line items/shipment units will not be consolidated when to do so proves economically infeasible because of costs for packing, repacking, handling, loading, stowage, or similar reasons.

g. NORS Requisitions. Shipments resulting from requisitions identified as "NORS" (not operationally ready supply) will not be consolidated with other materiel.

h. Expeaited Handling Shipments. Issue Priority Group/Transportation Priority 1 materiel on which code 999 (para B–1*e*(4)(*b*)) is indicated as the required delivery date entry of the requisition will not be consolidated with other materiel in a single shipment unit.

i. Unlike commodities of perishable subsistence (for example, potatoes and onions) or commodities with unlike keeping qualities (for example, eggs and bananas) will not be consolidated into the same shipment unit.

j. Issue Priority Group/Transportation Priority 1 and 2 Materiel. Materiel so designated will not be consolidated with materiel of any different issue priority group or transportation priority.

[3] With the cooperation of the US Army Materiel Command, US Coast Guard, US Navy, and US Air Force, procedures are being developed that will permit containerization of ammunition. Successful test shipments were made during 1969, and additional tests are planned. Ultimately, these tests should result in the development of standardized procedures for containerizing ammunition and, possibly, a reduction in the lift and safety proportions currently specified in CG–108.

I.C.C. class		Class	I	II-A	II-B	II-C	II-D	II-E	II-F	II-G	II-H	II-J	III	IV	V	VI	VII	VIII	IX-A	IX-B	IX-C	X-A	X-B	X-C	X-D	X-E	XI-A	XI-B	XI-C	XI-D	Class
C	Small-arms ammunition w/o explosive bullets, mechanical time fuze and like items	I	□	□	□	□	□	□	□	□	●	D	□	□	□	□	□	□	□	□	□	H	●	●	●	□	□	●	●	I
B	Bulk propellants, such as bsllistite, cordite, FNH, NH, and NC powder, "Made-up bag charges" in outside shipping containers	II-A	□	□	□	●	●	●	●	●	●	●	●	□	□	●	□	●	□	●	●	●	●	●	●	C	C	●	●	II-A
B	Fixed ammunition w/o explosive projectiles and like items	II-B	□	□	□	□	●	□	B	●	●	D	□	□	□	□	□	●	□	●	●	●	●	H	●	●	□	●	●	II-B
B or C	Pyrotechnics (fireworks)	II-C	□	●	□	□	●	□	A	●	●	D	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	II-C
*Var.	Chemical ammunition--WP or PWP filled (solid)	II-D	□	●	●	●	□	□	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	II-D
*Var.	Chemical ammunition--HC filled (solid)	II-E	□	●	□	□	□	□	A	□	●	●	□	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	II-E
*Var.	Chemical ammunition--FS or FM filled smoke (liquid)	II-F	□	●	B	A	●	A	□	A	●	●	A	B	B	●	B	●	●	●	●	●	●	●	●	□	□	●	●	II-F
*Var.	Chemical ammunition--IM, NP, or PT filled, incendiary composition (oil gel)	II-G	□	●	●	●	●	□	A	□	●	D	●	●	●	●	●	●	●	●	●	●	●	●	●	□	□	●	●	II-G
None	Chemical ammunition--water activated	II-H	●	●	●	●	●	●	●	●	□	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	II-H
*Var.	Chemical ammunition--TH filled incendiary composition (solid)	II-J	D	●	D	D	●	●	D	●	□	●	●	D	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	II-J
B or C	Fuzes, PD w/o booster; fuzes AT mine (nonchemical) w/o booster; fuzes, bomb tail w/o booster; fuzes, tracer; primers; primer detonators, etc.	III	□	●	□	●	●	□	A	●	●	●	□	□	□	□	●	□	●	●	●	●	●	●	●	●	●	●	●	III
A	Fixed and semifixed ammunition with explosive loaded projectile	IV	□	□	□	●	●	●	B	●	●	D	□	□	□	□	□	●	●	●	●	●	●	H	●	●	□	●	●	IV
A	Separate loading projectiles filled with explosive "D"	V	□	□	□	●	●	●	B	●	●	●	□	□	□	□	□	●	●	●	●	E	●	●	●	●	□	●	●	V
A	BD fuzes; PD fuzes with booster; bomb fuzes with booster; rocket fuzes with booster; and like items	VI	□	●	□	●	●	●	●	●	●	●	□	□	□	□	●	□	●	●	●	●	●	●	●	●	●	●	●	VI
A	Separate loading proj. filled with HE other than explosive "D"	VII	□	□	□	●	●	●	B	●	●	●	●	□	□	□	●	□	●	●	●	E	●	H	●	●	●	□	●	VII
A or C	Blssting caps; detonators; AT mine fuzes (chemical); etc.	VIII	□	●	●	●	●	●	●	●	●	●	□	●	●	□	●	□	●	●	●	●	●	●	●	●	●	●	●	VIII
A or B	Explosives in bulk, such as black powder, propellant explosives for small arms, etc.	IX-A	□	□	□	●	●	●	●	●	●	●	●	●	●	●	●	●	□	●	●	●	●	●	●	●	●	●	●	IX-A
A	High explosives, such ss dynamite, TNT, demolition blocks, etc.	IX-B	□	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	□	●	□	●	●	●	●	●	●	●	IX-B
A	Initisting snd priming explosives in bulk	IX-C	□	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	□	●	●	●	●	●	●	●	●	IX-C
A	Explosive bombs, mines, torpedoes, etc.	X-A	□	●	●	●	●	●	●	●	●	●	●	E	●	E	●	●	●	●	●	□	□	●	●	●	●	●	●	X-A
A	Explosives bombs, mines, etc., packed with fuze in integral package	X-B	H	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	□	□	●	●	●	●	●	●	X-B
A	Guided missiles with solid propellant motors, w, w/o HE warhead	X-C	●	●	H	●	●	●	●	●	●	●	●	H	●	●	H	●	●	●	●	●	●	□	●	●	●	●	●	X-C
A	Guided missiles with liquid petroleum fueled propellant motors, HE warhead	X-D	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	□	●	●	●	●	X-D
A	Rocket engines, liquid	X-E	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	□	●	●	●	X-E
A or Pois. A	Chemicsl ammunition--lethal	XI-A	□	C	●	●	●	●	□	□	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	□	□	●	●	XI-A
A or Pois. C	Chemical ammunition--nonlethal	XI-B	□	C	□	●	●	●	□	□	●	●	●	□	□	●	□	●	●	●	●	●	●	●	●	□	□	●	●	XI-B
*Var.	Fuels in containers for missile snd rocket engines	XI-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	F	●	XI-C
*Var.	Oxidizers in containers for missile and rocket engines	XI-D	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	F	XI-D

Legend: * -- Refers to different ICC classes: F.L., F.G., Cor. L., Oxy. M., etc.

● -- Shsll not be stowed together.

□ -- May be stowed together.

For A, B, C, D, E, F, G, and H, refer to paragraph 146.29-99 of CG108 for proper stowage (reference Code of Federal Regulations (CFR) 46, paragraph 146.29-99, and other portions of CFR 46 to assure compatibility and to preclude conflicts).

Table B-II-1. Compatibility Chart for Explosives and Other Hazardous Items (artwork)

APPENDIX C

TRANSPORTATION CONTROL NUMBER [1]

C–1.

Transportation Control Number—the Key to Effective Movement Control. It is safe to state that the most significant entry on the transportation control and movement document (TCMD) is the transportation control number (TCN). Materiel release orders (MRO's) lose their identity as single line documents upon being converted into shipment units, at which point it becomes necessary to provide some other means of identification. (See para B–1*f* for a definition and discussion of the shipment unit.) This requirement is satisfied by the TCN, which is the one entry that permits identification and location of a shipment unit all the way through the system from consignor to ultimate consignee. Each activity, whether shipper, receiver, mode operator, or movement control must refer to the TCN when requesting or providing information concerning a shipment; from this, it is clear that an error in the TCN or a duplication of numbers will inevitably result in delay, confusion, or inability to deliver the shipment to destination. In preparing the TCN, reference should be made to appendix B8, MILSTAMP, to avoid conflicts.

C–2. What is a TCN?

There are two types of TCN's—the MILSTRIP TCN and the non-MILSTRIP TCN:

a. A MILSTRIP TCN is a 17-digit number composed of an MRO document number, a suffix code (or an X if no sufficient code is given), a partial shipment code, and a split shipment code. The split shipment code is used only at a transshipment point; that is, where movement of the shipment changes from one mode to another—hence, the shipping activity always assigns a split shipment code of X. The MILSTRIP TCN identifies the *requisitioner*. An illustration follows, using MILSTRIP TCN WK4EYQ 0171 0612 XXX.[2]

[1] Refer to MILSTAMP, appendix B8.

[2] Separate each data element by a space to facilitate reading.

WK4EYQ	0171	0612	X	X	X
Activity address code of requisitioning activity (published in DOD 4000.25D (FOUO)).	Julian date (last digit of calendar year plus three-digit sequential day of year). (The Julian date calendar is shown tables C–1 and C–2 at the end of this appendix.)	Serial number of requisition by this specific activity for this specific date. If a "NORS" (not operationally ready supply) requisition, the first digit is replaced with the letter G to indicate a NORS requisition, taking precedence over priority 1.	Suffix code for use by National Inventory Control Point (NICP) in CONUS. Hence, always an X in an oversea theater.	Partial shipment code.	Split shipment code (used only by transshipment point).

MRO DOCUMENT NUMBER
(From columns 30 through 43, DD Form 1348–1)

MRO DOCUMENT NUMBER
plus
SUFFIX CODE X
plus
PARTIAL SHIPMENT CODE
plus
SPLIT SHIPMENT CODE
EQUALS
MILSTRIP TCN

b. The coded activity address reveals the service from which the document originated, the oversea major and subarea geographic location of the requisitioning or shipping activity, and the supply account or requisitioning account number of the activity. This portion of the TCN number described above breaks down as follows:

A—coded designator of the service originating the document; in this case, Army (AR 725–50).
K—coded designator of the oversea major geographic area; in this case, Europe (AR 725–50).
4—coded designator of the geographic subarea; in this case, the Federal Republic of Germany (AR 725–50).
501—supply account or requisitioning account number assigned by the Department of Defense.

c. A non-MILSTRIP TCN, also a 17-digit number, is composed of the activity address code of the shipping activity, the Julian date of assignment, the code for identifying the type of shipment, a three-digit shipment serial number, the suffix code X, the partial shipment code, and the split shipment code. Again the split shipment code is used only at a transshipment point. The non-MILSTRIP TCN identifies the *shipper*. To illustrate, let us examine the non-MILSTRIP TCN A26TAM 0250 P001 XXX:

A26TAM	0250	P001 [a]	X	X	X
Shipping activity address code (DOD 4000.25D) (FOUO))	Julian date	Type of shipment code and shipment serial number	Suffix code	Partial shipment code	Split shipment code

[a] Type of shipment code indicator: B—personal baggage; E—exchange merchandise; H—household goods; P—POV; R—red circle—unit moves; T—subsistence issue; X—miscellaneous, not otherwise specified (NOS); Y—yellow disk, unit moves; Z—unit organizationsl equipment.

SHIPPING ACTIVITY ADDRESS CODE
plus
JULIAN DATE
plus
SUFFIX CODE X
plus
PARTIAL SHIPMENT CODE
plus
SPLIT SHIPMENT CODE
EQUALS
NON-MILSTRIP TCN

C–3. TCN Assigned for a One-Increment MILSTRIP Shipment of Material of a Single MRO

(fig C–1)

When the shipment unit is composed of the material of a single MRO shipped in one increment, a MILSTRIP TCN is assigned. In this case, select the MILSTRIP document number from the MRO; if there is no suffix code in the document number, add an X in space 15, followed by a partial shipment code X in space 16, and a split shipment code X in space 17.

C–4. TCN Assigned for a "2 to 25" Increment MILSTRIP Shipment of Material of a Single MRO

(fig C–2)

When the material of a single MRO must be shipped in from 2 to 25 increments, then—through the application of the partial shipment code—a separate MILSTRIP TCN is assigned to each increment. Each TCN has the same MRO document number and the same suffix code X; but the partial shipment code differs for each TCN. In the sixteenth space of the TCN, substituting for the letter X, the TCN for the first increment has a partial shipment code A; for the second increment; B; and so through the alphabet as required— with the exception of X, *which is not used for partialing.* In *every case,* however, the TCN for the *last increment* will show Z as the partial shipment code. Using the partial shipment code in this manner permits assignment of a MILSTRIP TCN for as many as 25 increments.

C–5. TCN Assigned a Known Shipment of More Than 25 Increments From a Single MRO

(fig C–3)

a. If it is known during the planning phase that the material of a single MRO must be shipped in more than 25 increments, a non-MILSTRIP TCN is assigned to each increment. In this case, all TCN's contain the same shipping activity address code, date, type of shipment code, suffix code X, and split shipment code X; however, the shipment serial number (digits 12 through 14) and the partial shipment code (digit 16) differ for each increment.

(1) The TCN for the first increment will have a shipment serial number of 001 and a partial shipment code A; the TCN for the second increment will have a serial number of 001 and a partial shipment code B; and so through the alphabet—with the exception of X—to the 24th increment which will have a partial shipment code Y.

(2) In the TCN for the 25th increment, the serial number will change to 002 and the partial code will revert back to A. This procedure is followed until TCN's have been assigned to all but the last increment. The last increment will

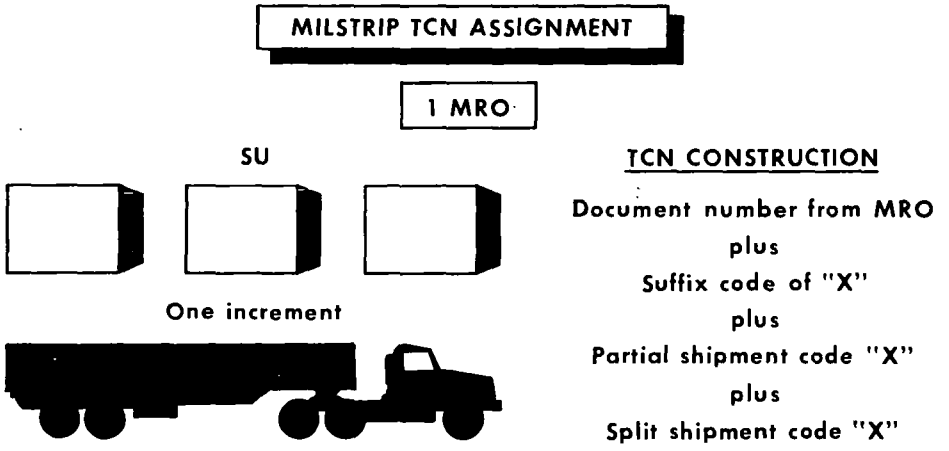


Figure C–1. MILSTRIP TCN assignment for a one-increment shipment.

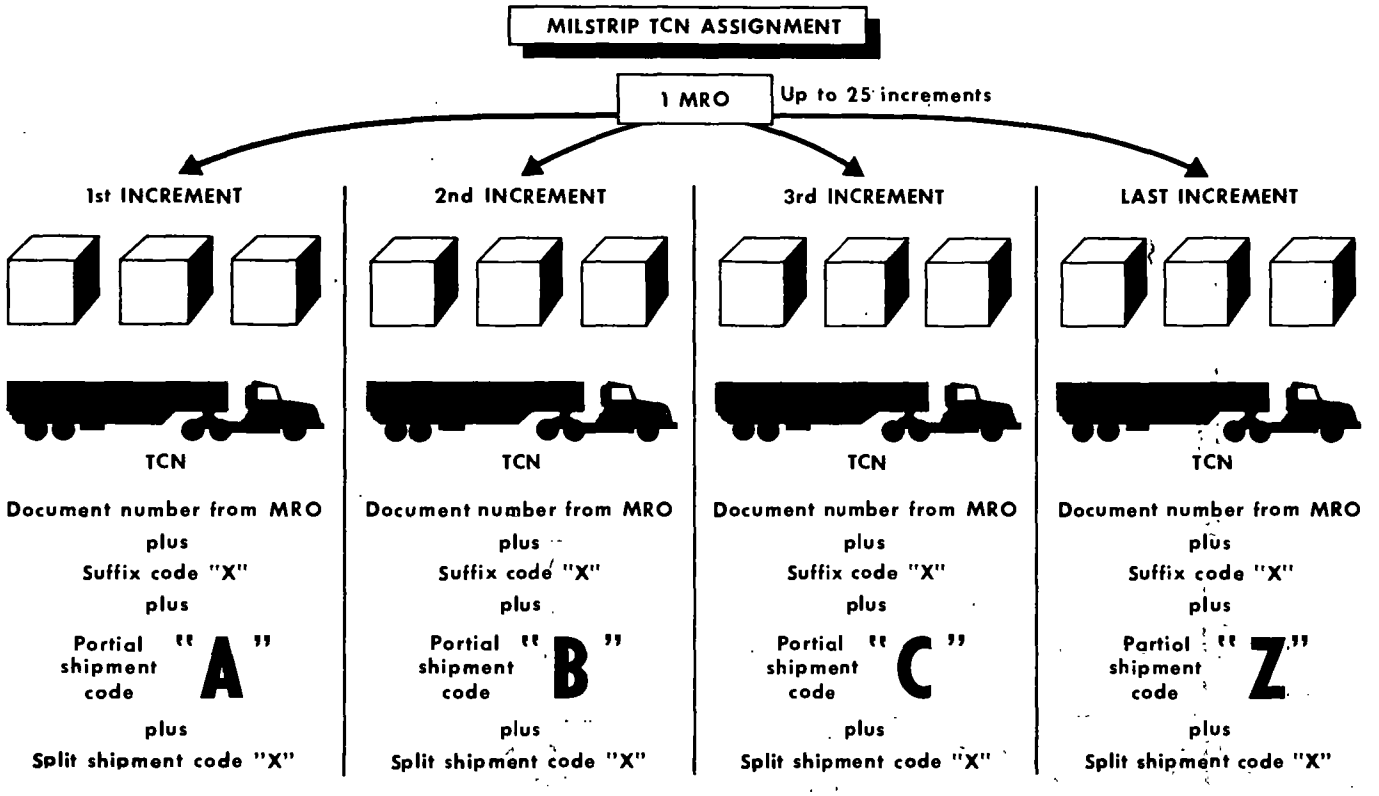


Figure C–2. MILSTRIP TCN assignment for a 2- to 25-increment shipment.

always be identified by a partial shipment code Z.

b. When a non-MILSTRIP TCN is assigned, MILSTRIP shipment status must be provided to the ultimate consignee to provide a cross reference between the original requisition and the assigned non-MILSTRIP TCN.

C–6. TCN Assigned an Unanticipated Shipment of More Than 25 Increments from a Single MRO

(fig C–4)

a. When the material of a single MRO must be shipped in more than 25 increments and this fact was not anticipated during the planning stage, then a *combination* of MILSTRIP and non-MILSTRIP TCN's is assigned. In this case, MILSTRIP TCN's are assigned to the first 24 increments and non-MILSTRIP TCN's to all subsequent increments except the last. The TCN for the last increment reverts back to the MILSTRIP TCN, with a partial shipment code Z to identify it as the last partial shipment.

b. When a non-MILSTRIP TCN is assigned, MILSTRIP shipment status must be provided to the ultimate consignee to provide a cross-reference between the original requisition and the assigned non-MILSTRIP TCN.

C–7. TCN Assigned a Shipment Unit of Material from More Than One MRO and Shipped in One Increment

(fig C–5)

When a shipment unit is composed of the material of several MRO's and is shipped in one increment, one MILSTRIP TCN is assigned to cover all the material in the shipment. To construct the TCN in this case, use the MILSTRIP document number from the MRO having the earliest required delivery date, adding the suffix code X, a partial shipment code X, and a split shipment code X. Should none of the MRO's have a required delivery date, use the document number of the MRO having the earliest requisition date.

C–8. TCN Assigned for a Shipment of Material from Multiple MRO's and Shipped in More Than One Increment

(fig C–6)

When a shipment unit composed of multiple MRO's must be shipped in more than one increment, each increment becomes a partial shipment with the TCN modified with the use of the partial shipment code in the sixteenth position to identify each increment.

NON-MILSTRIP TCN ASSIGNMENT

1 MRO

Over 25 Increments

Increments					Suffix code (15th digit)	Partial shipment code (16th digit)	Split shipment code (17th digit)
1st	Shipping activity address code	Julian date	Type of shipment code	Shipment serial number 001	X	A	X
2nd					X	B	X
					X		X
					X		X
24th					X	Y	X
25th	Shipping activity address code	Julian date	Type of shipment code	Shipment serial number 002	X	A	X
					X		X
					X		X
48th					X	Y	X
49th	Shipping activity address code	Julian date	Type of shipment code	Shipment serial number 003	X	A	X
50th (LAST)					X	Z	X

Figure C–3. MILSTRIP TCN assignment for a known shipment of more than 25 increments.

COMBINATION MILSTRIP and NON-MILSTRIP TCN ASSIGNMENT

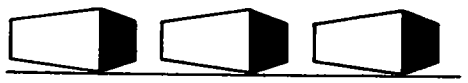
Over 25 increments — 1 MRO

Increments					Suffix code "X" (15th digit)	Partial shipment code (16th digit)	Split shipment code (17th digit)
	MILSTRIP						
1st	MRO document number				X	A	X
					X		X
24th					X	Y	X
	NON-MILSTRIP						
25th	Shipping activity address Code	Julian date	Type of shipment code	Shipment serial number 001	X	A	X
					X		X
48th					X	Y	X
49th				Shipment serial number 002	X	A	X
					X		X
					X		X
56th					X	H	X
	MILSTRIP						
57th (LAST)	MRO document number				X	Z	X

Figure C–4. MILSTRIP TCN assignment for an unanticipated shipment of more than 25 increments.

MILSTRIP TCN ASSIGNMENT

2 or more MRO's



One increment

TCN CONSTRUCTION

= Document number from MRO with the earliest RDD

or

= Document number having earliest requisition date
plus
Suffix code "X"
plus
Partial shipment code "X"
plus
Split shipment code "X"

Figure C–5. MILSTRIP TCN assignment for a one-increment shipment from more thn one MRO.

MILSTRIP TCN ASSIGNMENT

Multiple MRO's

1st increment

2nd increment

TCN CONSTRUCTION	TCN CONSTRUCTION
Document number from MRO in this increment with the earliest RDD or Document number containing earliest requisitioning date plus Suffix code "X" plus Partial shipment code "A" plus Split shipment code "X"	Document number from MRO in this increment with the earliest RDD or Document number containing earliest requisitioning date plus Suffix code "X" plus Partial shipment code "Z" plus Split shipment code "X"

Figure C–6. MILSTRIP TCN assignment for a shipment in more than one increment from multiple MRO's.

Table C–1. Perpetual Julian Date Calendar

Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Day
1	001	032	060	091	121	152	182	213	244	274	305	335	1
2	002	033	061	092	122	153	183	214	245	275	306	336	2
3	003	034	062	093	123	154	184	215	246	276	307	337	3
4	004	035	063	094	124	155	185	216	247	277	308	338	4
5	005	036	064	095	125	156	186	217	248	278	309	339	5
6	006	037	065	096	126	157	187	218	249	279	310	340	6
7	007	038	066	097	127	158	188	219	250	280	311	341	7
8	008	039	067	098	128	159	189	220	251	281	312	342	8
9	009	040	068	099	129	160	190	221	252	282	313	343	9
10	010	041	069	100	130	161	191	222	253	283	314	344	10
11	011	042	070	101	131	162	192	223	254	284	315	345	11
12	012	043	071	102	132	163	193	224	255	285	316	346	12
13	013	044	072	103	133	164	194	225	256	286	317	347	13
14	014	045	073	104	134	165	195	226	257	287	318	348	14
15	015	046	074	105	135	166	196	227	258	288	319	349	15
16	016	047	075	106	136	167	197	228	259	289	320	350	16
17	017	048	076	107	137	168	198	229	260	290	321	351	17
18	018	049	077	108	138	169	199	230	261	291	322	352	18
19	019	050	078	109	139	170	200	231	262	292	323	353	19
20	020	051	079	110	140	171	201	232	263	293	324	354	20
21	021	052	080	111	141	172	202	233	264	294	325	355	21
22	022	053	081	112	142	173	203	234	265	295	326	356	22
23	023	054	082	113	143	174	204	235	266	296	327	357	23
24	024	055	083	114	144	175	205	236	267	297	328	358	24
25	025	056	084	115	145	176	206	237	268	298	329	359	25
26	026	057	085	116	146	177	207	238	269	299	330	360	26
27	027	058	086	117	147	178	208	239	270	300	331	361	27
28	028	059	087	118	148	179	209	240	271	301	332	362	28
29	029		088	119	149	180	210	241	272	302	333	363	29
30	030		089	120	150	181	211	242	273	303	334	364	30
31	031		090		151		212	243		304		365	31

Table C–2. Julian Date Calendar for Leap Years

Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Day
1	001	032	061	092	122	153	183	214	245	275	306	336	1
2	002	033	062	093	123	154	184	215	246	276	307	337	2
3	003	034	063	094	124	155	185	216	247	277	308	338	3
4	004	035	064	095	125	156	186	217	248	278	309	339	4
5	005	036	065	096	126	157	187	218	249	279	310	340	5
6	006	037	066	097	127	158	188	219	250	280	311	341	6
7	007	038	067	098	128	159	189	220	251	281	312	342	7
8	008	039	068	099	129	160	190	221	252	282	313	343	8
9	009	040	069	100	130	161	191	222	253	283	314	344	9
10	010	041	070	101	131	162	192	223	254	283	315	345	10
11	011	042	071	102	132	163	193	224	255	285	316	346	11
12	012	043	072	103	133	164	194	225	256	286	317	347	12
13	013	044	073	104	134	165	195	226	257	287	318	348	13
14	014	045	074	105	135	166	196	227	258	288	319	349	14
15	015	046	075	106	136	167	197	228	259	289	320	350	15
16	016	047	076	107	137	168	198	229	260	290	321	351	16
17	017	048	077	108	138	169	199	230	261	291	322	352	17
18	018	049	078	109	139	170	200	231	262	292	323	353	18
19	019	050	079	110	140	171	201	232	263	293	324	354	19
20	020	051	080	111	141	172	202	233	264	294	325	355	20
21	021	052	081	112	142	173	203	234	265	295	326	356	21
22	022	053	082	113	143	174	204	235	266	296	327	357	22
23	023	054	083	114	144	175	205	236	267	297	328	358	23
24	024	055	084	115	145	176	206	237	268	298	329	359	24
25	025	056	085	116	146	177	207	238	269	299	330	360	25
26	026	057	086	117	147	178	208	239	270	300	331	361	26
27	027	058	087	118	148	179	209	240	271	301	332	362	27

Table C–2. Julian Date Calendar for Leap Years—Continued

Day	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Day
28	028	059	088	119	149	180	210	241	272	302	333	363	28
29	029	060	089	120	150	181	211	242	273	303	334	364	29
30	030		090	121	151	182	212	243	274	304	335	365	30
31	031		091		152		213	244		305		366	31

APPENDIX D

MOVEMENT PRIORITIES

D–1. General

This appendix is intended to help the reader better understand movement priorities by explaining the interrelationship between supply and transportation in determining priorities. Additionally, this appendix relates priorities to the number of hours or days permitted from the date of the supply request to the date of delivery and notes the transportation mode normally used under each priority.

D–2. Issue Priority System

To present the complete picture of the priority system, it is necessary to start with the issue priority system. (A detailed discussion of the issue priority system is contained in AR 725–50.) The issue priority system is based on a combination of factors that relate the requisitioner's force/activity designator with an urgency-of-need designator to determine issue priorities. Using the guidance and criteria set forth in AR 725–50, the requisitioning activity determines the urgency-of-need designator. Urgency-of-need designators are established in three areas: A through C. By combining the urgency-of-need designator with the force/activity designator, the requisitioning activity can determine the priority designator to be used for any given shipment. The force/activity designator is represented by a Roman numeral that indicates the relative importance of a unit, organization, or facility performing a mission or project. Force/activity designators are assigned by each major commander or by the joint chiefs of staff. Supply or MILSTRIP priorities are derived from relating the force/activity designator to the urgency-of-need designator as indicated below:

Force/activity designator	Urgency-of-need designator		
	A Unit unable to perform mission	B Unit mission impaired	C Not specifically covered by other designators
I—general war	01	04	11
II—limited war	02	05	12
III—ready to deploy within 30 days	03	06	13
IV—ready to deploy after 30 days but before 90 days	07	09	14
V—ready to deploy after 90 days	08	10	15

The majority of shipments carry a supply, or MILSTRIP, priority.[1] The fifteen MILSTRIP issue priority areas are then placed in three issue groups as shown below, with MILSTAMP establishing corresponding transportation priorities.

UMMIPS issue priority designators	*MILSTRIP issue group*	*MILSTAMP transportation priority*
01 through 03	1	1
04 through 08	2	2
09 through 15	3	3

D–3. MILSTAMP Transportation Priorities

MILSTAMP transportation priorities are assigned as indicated below and are not upgraded unless specifically directed by a modification to the original supply demand. (Reference should be made to chap 3, MILSTAMP, for detailed procedures.) Shipments requiring expedited handling (MILSTRIP issue priority group 1 materiel for which code 999 is indicated in the required delivery date (RDD) field of the requisition) receive the highest precedence of handling, overriding all other priorities, projects, and required delivery dates. (See para B–1*f*(4)(*b*) for an explanation of code 999.) In addition to the

[1] Note that the requisitioning activity establishes the priority through the urgency-of-need designator. Although any movement control representative may question or "challenge" the priority, he cannot arbitrarily change it. In challenging a priority, the movement representative (usually the transportation movement officer) first goes to the shipper and, stating his case, asks the shipper or requisitioner as appropriate to change the priority. If the shipper or requisitioner refuses, the transportation movement officer—if he feels strongly enough about the matter—presents the situation to the movement control center (MCC), giving all facts. The MCC will then make a decision within priority criteria established by the theater commander. If the MCC cannot come to a decision, the matter is referred to the transportation command assistant chief of staff, movements, for resolution.

following three UMMIPS [2]/MILSTAMP transportation priorities, transportation priority 9 may also be assigned for Military Airlift Command airlift for retrograde materiel as set forth in MILSTAMP (DOD Reg 4500.32–R).

Issue group	*Priority designator*	*CONUS*	*Overseas*
One	1–3	120 Hours	168 Hours
Two	4–8	8 Days	15 Days
Three	9–15	20 Days	45–55 Days
Four	16–20	30 Days	60–75 Days

Note: This chart shows the time frames, by issue group, in hours and/or days, by which delivery must be made. Column entitled *CONUS* also applies to delivery within the same theater.

D–4. Selecting Mode of Transportation According to MILSTAMP Priority

Selection of the mode of transportation is governed by the transportation priority, required delivery date (when specified), weight and size of shipment, nature of the materiel, costs of transportation, distance to be shipped, and modes of transportation available between consignor and consignee. Guidance for selection of the mode of transportation is shown below:

a. MILSTAMP Transportation Priority 1 and Priority 2. Airlift is the preferred mode of transportation for priority 1 and priority 2 shipments. Should airlift be unavailable or should the nature of the shipment make airlift impracticable, the next fastest available transportation should be used.

b. MILSTAMP Transportation Priority 3. Ordinary or expedited surface modes of transportation should be used to move priority 3 shipments. Airlift may be used when surface transportation cannot provide timely and efficient delivery when the only access to the consignee is by air, or when other considerations make airlift appropriate.

D–5. Variances Within Theaters

In summation, it is stressed that within a theater of operations the theater commander may establish such priorities as he considers necessary to satisfy the support of his mission. As an example, it may be desirable to establish "super" priorities within priority 1 in order to satisfy specific movement requirements generated by the tactical situation or other circumstances.

[2] Uniform materiel movement and issue priority system.

APPENDIX E

DAILY INSTALLATION SITUATION REPORT (DA Form 1322)

E-1. Instructions for Completing Form

DA Form 1322 (fig E-1) is used to report the status of rail, barge, commercial highway, and military highway equipment and containers. Information regarding each mode of transportation is entered separately on the form, with a line separating data reflected for each mode.

a. Column a—enter the name of the installation. In addition, indicate the nearest city or town, if considered necessary.

b. Column b—enter the class of supplies received or shipped from the installation; for example, a QM class I depot would be shown as QMI. Each item should be placed on a separate line.

c. Column c—enter the number of inbound conveyances carried over from the previous day.

d. Column d—enter the total number of inbound conveyances that have been moved into the installation area and spotted for unloading during the 24-hour period covered by the report.

e. Column e—enter the total number of inbound conveyances actually unloaded by the installation during the period. Do not include any that have been reconsigned.

f. Column f—enter the amount of tonnage (short tons) unloaded during the period covered by the report.

g. Column g—enter the movement program line number.

h. Column h—enter the total number of inbound or on-hand cars or other transportation units reconsigned to a new destination during the period.

i. Columns i, j, k, and l—enter the number of inbound loaded conveyances on hand in the installation at the end of the period. In column i indicate the number of loaded conveyances held for 24 hours or less. In column j indicate the number held over 24 hours but less than 48 hours. In column k indicate the number held over 48 hours. In column l indicate the total conveyances on hand at the end of period (i + j + k). These figures are obtained by making a physical check of the installation.

j. Column m—enter conveyances still under the control of an operating service but waiting to be spotted for unloading.

k. Column n—enter the number of conveyances loaded the day before but not shipped out.

l. Column o—enter the number of conveyances which were reconsigned—that is, those which were transferred from the inbound column to the outbound column. This figure is taken from the column headed *reconsigned* in the inbound section.

m. Column p—enter the total number of conveyances the installation has loaded during the 24-hour period. Do not include any reconsigned conveyances.

n. Column q—enter the total number of outbound conveyances loaded by the installation, plus the total number of conveyances reconsigned by the installation that have been forwarded during the period covered by the report.

o. Column r—enter the amount of tonnage involved.

p. Column s—enter the movement program line number.

q. Column t—enter the accumulative total number of outbound conveyances loaded by the installation that are on hand waiting to be forwarded at the end of the period. Include conveyances that have been reconsigned to new destinations.

r. Column u—indicate the number of empty conveyances by type required by the installation for the next day's operation; for example, for railway cars show B for boxcar, F for regular flatcars, HF for heavy-duty flatcars, LG for low-side gondola, HG for high-side gondola, R for refrigerator car, and T for tank car.

s. Column v—enter the total number (by type) of empty conveyances made available for use of the installation, including all empties in the installation. Use the same symbols as shown in *r* above.

t. Column w—enter any pertinent informa-

DAILY INSTALLATION SITUATION REPORT (FM 55-22)

TYPE OF CONVEYANCE: ☐ RAIL ☐ BARGE ☆ TRUCK

TO: DTMO K-Slautern

FROM: (Reporting Agency) Kaiserslautern Post

24-HOUR PERIOD ENDING: TIME 1700 DATE 21 Nov 1968

INSTALLATION DESIGNATION AND LOCATION	SERVICE AND CLASS	INBOUND: ON HAND START PERIOD* UNITS	INBOUND: RECEIVED* UNITS	INBOUND: UNLOADED QUANTITY* UNITS	INBOUND: UNLOADED QUANTITY* TONS	INBOUND: UNLOADED AUTH	INBOUND: RECON-SIGNED* UNITS	INBOUND: ON HAND END PERIOD 24 HR OR LESS UNITS	INBOUND: ON HAND END PERIOD OVER 24 HR UNITS	INBOUND: ON HAND END PERIOD OVER 48 HR UNITS	INBOUND: ON HAND END PERIOD TOTAL UNITS	AWAITING PLACEMENT UNITS	OUTBOUND: ON HAND START PERIOD** UNITS	OUTBOUND: RECON-SIGNED** UNITS	OUTBOUND: LOADED** UNITS	OUTBOUND: FORWARDED** QUANTITY UNITS	OUTBOUND: FORWARDED** QUANTITY TONS	OUTBOUND: FORWARDED AUTH	OUTBOUND: ON HAND END PERIOD UNITS	EMPTIES: REQUIRED UNITS	EMPTIES: AVAILABLE UNITS	REMARKS
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	e
AK4B19 Kaiser-slautern	I	4	7	9	126	L-41	1	1	0	0	1	2	3	1	2	5	56	L-181	1	5	4	
	II & IV	2	1	3	28	L-80	0	0	0	0	0	0	1	0	1	1	10	L-190	0	1	0	
	Pkg III	0	1	1	14	L-62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

SAMPLE

*Column (c+d) − (e+h) = Column l
**Column (n+o+p) − q = Column t

TYPED NAME, GRADE AND TITLE OF PERSON AUTHENTICATING REPORT: R. W. CLARK, Captain, Installation Transportation Officer

SIGNATURE: R W Clark

DA FORM 1 MAY 55 1322

Figure E–1. Daily installation situation report (DA Form 1322).

tion concerning the operations such as description of special empty conveyances required or reasons for loaded conveyances being held beyond established time limits.[1]

[1] Local ground rules and contractual service agreements will govern time limitations imposed on loading and unloading activities for loading cargo into or unloading cargo from containers before demurrage cost starts. Using agencies will make every effort to abide by these limitations and control cargo load and unload procedures to meet such restrictions. This policy is applicable to containers either on or off chassis, except for those that have been specifically designated as mobile warehouses. Some containers may be transported on conventional military cargo semitrailers rather than on container chassis; operating policies discussed are spplicable to containers transported on such semitrailers as well as those transported on conventional container chassis. Cargo load and unload time will, at the discretion of the theater commander, apply to all *military type containers and chassis* to assure expeditious turnaround and efficient utilization of equipment.

APPENDIX F

MOVEMENT PLANNING PRACTICAL EXERCISE

(SOLOG 27R)

Section I. INTRODUCTION

F–1. General

This exercise is designed to acquaint the movement planner with the mechanics of movement planning. Solutions are provided to each situation; however, in order to derive the maximum benefit from this exercise, the reader should attempt to develop the data required for each situation before referring to the given solutions.

F–2. Background

a. The United States is at war with an aggressor nation as the result of an unprovoked attack. The aggressor, having overrun the entire Asiatic continent and portions of Europe, is bent upon world conquest. Nations opposing the aggressor include the United States and its allies, Camelot, Umbriago, and the Republic of Euphoria. The allied nations have mobilized completely, despite severe damage to industrial and terminal areas. Aggressor's strategy is apparently aimed at weakening resistance by destroying the allies' means of waging war prior to their carrying out combined airborne and amphibious operations.

b. A successful amphibious invasion was launched on the coast of the aggressor nation. Allied forces met only light resistance and made rapid advances.

c. A communications zone (COMMZ) (fig F–1) has been established for logistic support of United Sates forces, with the theater army support command (TASCOM) headquarters established in the vicinity of Port 1. The COMMZ is not a divided area.

d. Current directives from the theater army commander have assigned to TASCOM the control and planning responsibilities for movements over the lines of communication in the US zone as far forward as possible. This responsibility has, in turn, been given to the TASCOM assistant chief of staff, movements.

(Fig F–1 located in back of manual)

Section II. FIRST REQUIREMENT

F–3. Situation.

a. It is now D+29. You are assigned to the materiel command (MATCOM) as the transportation movement supervisor (MOS 71N40/50). The MATCOM is responsible for procurement and supply of all petroleum products and for operation of the pipeline system. You are responsible to coordinate with, and assist representatives of the Petroleum Group in planning the petroleum pipeline movement. Planning is in consonance with the principles of movement as set forth in SOLOG 27 (app H).

b. The POL control officer has submitted to your office the requirements for daily movement of bulk petroleum during the period D+29 through D+35. These are shown in table F–1. (See fig F–1 for locations of origin points and destinations shown in table.)

Table F–1. Requirements for Daily Movement of Bulk Petroleum from D+29 through D+35

Origin	*Destination*	*Class of supply*	*Short tons*
Port 2	AT–1	III and IIIA	1,42
Port 2	AT–2	III and IIIA	1,425
Port 2	AT–3	III and IIIA	1,425
Port 2	AT–4	III and IIIA	1,425
Port 2	AT–5	III and IIIA	1,425
Port 2	AT–6	III and IIIA	1,450
Port 2	Depot 701	III and IIIA	300
Port 2	Depot 709	III and IIIA	500
Port 2	Depot 706	III and IIIA	1,850
Port 2	Depot 704	III and IIIA	300
Port 2	Depot 705	III and IIIA	480
Port 2	Depot 708	III and IIIA	1,950
Depot 706	GS/DS A	III and IIIA	1,150
Depot 708	DS/GS B	III and IIIA	1,150
Depot 709	DS/GS 10	III and IIIA	200
Depot 706	DS/GS 20	III and IIIA	200
Depot 706	DS/GS 30	III and IIIA	200
Depot 705	DS/GS 40	III and IIIA	200
Depot 708	DS/GS 50	III and IIIA	200
Depot 708	DS/GS 60	III and IIIA	170
		Total tonnage	17,425

c. The available pipelines for use have capacities as follows:

6-inch pipeline: 3,000 short tons daily
8-inch pipeline: 3,480 short tons daily

d. Keeping in mind the principles of movements (SOLOG 27, app H), plan to move the requirements as far forward as possible by the most economical mode having the available capacity.

F–4. Requirement

Using the daily bulk petroleum requirements blank schematic shown as figure F–2, enter each daily bulk petroleum requirement in the appropriate box shown between the point of origin (Port 2) and the destination. These figures are taken from the listing in table F–1 above. After you have completed this requirement, refer to figure F–3 for the solution.

(Fig F–2 located in back of manual)

(Fig F–3 located in back of manual)

Section III. SECOND REQUIREMENT

F–5. Situation

The situation is unchanged from that of the first requirement (para F–3 above).

F–6. Requirement

Using the petroleum pipeline blank schematic shown as figure F–4, prepare the pipeline petroleum movement schematic by taking the requirements shown in the boxes in figure F–3 and entering them in the appropriate pipeline. Show tonnage and destination. *Do not* exceed the capability of any given pipeline. Use the pipeline as far as it goes. After you have completed this requirement, refer to figure F–5 for the solution.

(Fig F–4 located in back of manual)

(Fig F–5 located in back of manual)

Section IV. THIRD REQUIREMENT

F–7. Situation

The situation is unchanged from that of the first requirement (para F–3 above).

F–8. Requirement

After having moved most of the bulk petroleum requirements by pipeline, how many tons remain for movement by other modes of transportation? Any further requirements indicate that either you did not have pipeline to final destination or that the pipelines could not accommodate all the requirements. Using figure F–1 in conjunction with the origin and destination information shown in table F–1, determine the added requirements that cannot be moved by pipeline and list them under the following headings:

Origin *Destination* *Short tons*

Now refer to table F–2 for the solution. As you will see, a total of 6,620 short tons of bulk petroleum remain to be moved by modes other than pipeline.

Table F–2. Bulk Petroleum Requirements That Cannot Be Met by Pipeline

Origin	*Destination*	*Short tons*
Depot 706	DS/GS A	1,150
Depot 708	DS/GS B	1,150
Depot 709	DS/GS 10	200
Depot 706	DS/GS 20	200
Depot 706	DS/GS 30	200
Depot 705	DS/GS 40	200
Depot 708	DS/GS 50	200
Depot 708	DS/GS 60	170
Pipehead, CP–B201	Depot 701	300
Pipehead, CP–B201	AT–2	1,425
Pipehead, Depot 709	AT–5	1,425
		6,620

Section V. FOURTH REQUIREMENT

F–9. Situation

a. You are now the chief movement plans supervisor of the plans and programs division of the movement control center.

b. US Army forces and the Air Force have submitted their daily supply movement requirements for the 7-day period from D+29 through D+35 to the assistant chief of staff (ACofS), movements, as required by current directives. These requirements have been analyzed and approved by the ACofS, movements, and forwarded to the plans and programs division of the movement control center for preparation of the movement plan. The daily supply movement requirements are shown in table F–3.

c. The Materiel Command staff transportation office has submitted the leftover bulk petroleum requirements that were not moved through the pipeline due to lack of enough capability (table F–2). These bulk petroleum requirements were forwarded to the plans and programs division to be included in the current requirements to be moved.

d. After the movement meeting conducted by the plans and programs division of the movement control center, the chief of the plans and programs division directed you to make up a supply requirement schematic in order that your office could better see what movement problems might affect the assigned transportation capability. Figure F–6 provides a blank supply requirements schematic to be used for this exercise.

e. Your section has also received the approved additional 11 line items of bulk petroleum requirements (table F–4). These bulk petroleum requirements must be added to the supply requirements and to your supply requirements schematic.

F–10. Requirement

Add the leftover bulk petroleum requirements from table F–2 to the supply movement requirements and assign each one an identifying line number, starting with number 79. Tabulate the requirements under the following headings:

Line number *Origin* *Destination* *Class* *Short tons*

After completing this requirement, refer to table F–4 for the solution.

Table F–3. Daily Supply Requirements for D+29 through D+35

Line number	*Origin*	*Destination*	*Class*	*Short tons*
1	Port 3	AT–1	I	100
2	Port 3	AT–2	I	100
3	Port 3	AT–3	I	100

Table F–3. Daily Supply Requirements for D+29 through D+35—Continued

Line number	*Origin*	*Destination*	*Class*	*Short tons*
4	Port 1	AT–4	I	100
5	Port 3	AT–5	I	100
6	Port 1	AT–6	I	100
7	Port 3	Depot 701	I	95
8	Port 3	Depot 709	I	205
9	Port 3	Depot 706	I	570
10	Port 1	Depot 704	I	95
11	Port 3	Depot 705	I	205
12	Port 1	Depot 708	I	570
13	Depot 706	DS/GS A	I	255
14	Depot 708	DS/GS B	I	255
15	Depot 709	DS/GS 10	I	55
16	Depot 706	DS/GS 20	I	55
17	Depot 706	DS/GS 30	I	55
18	Depot 705	DS/GS 40	I	55
19	Depot 708	DS/GS 50	I	55
20	Depot 708	DS/GS 60	I	55
21	Depot 709	DS 100	I	55
22	Depot 706	DS 200	I	55
23	Depot 706	DS 300	I	55
24	Depot 705	DS 400	I	55
25	Depot 708	DS 500	I	55
26	Depot 708	DS 600	I	55
27	Port 3	Depot 701	II & IV	265
28	Port 3	Depot 709	II & IV	390
29	Port 3	Depot 706	II & IV	1,020
30	Port 1	Depot 704	II & IV	265
31	Port 3	Depot 705	II & IV	390
32	Port 1	Depot 708	II & IV	1,010
33	Port 3	AT–1	II& IV	510
34	Port 3	AT–2	II & IV	510
35	Port 3	AT–3	II & IV	510
36	Port 1	AT–4	II & IV	510
37	Port 3	AT–5	II & IV	510
38	Port 1	AT–6	II & IV	510
39	Depot 706	DS/GS A	II & IV	60
40	Depot 708	DS/GS B	II & IV	60
41	Depot 709	DS/GS 10	II & IV	60
42	Depot 706	DS/GS 20	II & IV	60
43	Depot 706	DS/GS 30	II & IV	60
44	Depot 705	DS/GS 40	II & IV	60
45	Depot 708	DS/GS 50	II & IV	60
46	Depot 708	DS/GS 60	II & IV	60
47	Depot 709	DS 100	II & IV	65
48	Depot 706	DS 200	II & IV	65
49	Depot 706	DS 300	II & IV	65
50	Depot 705	DS 400	II & IV	65
51	Depot 708	DS 500	II & IV	65
52	Depot 708	DS 600	II & IV	65
53	LOTS Green	AT–1	V & VA	415
54	LOTS Green	AT–2	V & VA	415
55	LOTS Green	AT–3	V & VA	415
56	LOTS Red	AT–4	V & VA	420
57	LOTS Green	AT–5	V & VA	415
58	LOTS Red	AT–6	V & VA	425
59	LOTS Green	Depot 701	V & VA	10
60	LOTS Green	Depot 709	V & VA	615
61	LOTS Green	Depot 706	V & VA	2,115
62	LOTS Red	Depot 704	V & VA	20
63	LOTS Green	Depot 705	V & VA	610
64	LOTS Red	Depot 708	V & VA	2,085
65	Depot 706	DS/GS A	V & VA	900
66	Depot 708	DS/GS B	V & VA	870
67	Depot 709	DS/GS 10	V & VA	400
68	Depot 706	DS/GS 20	V & VA	400
69	Depot 706	DS/GS 30	V & VA	400

Line number	Origin	Destination	Class	Short tons
70	Depot 705	DS/GS 40	V & VA	400
71	Depot 708	DS/GS 50	V & VA	400
72	Depot 708	DS/GS 60	V & VA	400
73	Depot 709	DS 100	V & VA	200
74	Depot 706	DS 200	V & VA	200
75	Depot 706	DS 300	V & VA	200
76	Depot 705	DS 400	V & VA	200
77	Depot 708	DS 500	V & VA	200
78	Depot 708	DS 600	V & VA	200

Table F–4. Line Items To Be Added to Daily Supply Requirements Shown in Table F–3

Line number	Origin	Destination	Class	Short tons
79	Depot 706	DS/GS A	III & IIIA	1,150
80	Depot 708	DS/GS B	III & IIIA	1,150
81	Depot 709	DS/GS 10	III & IIIA	200
82	Depot 706	DS/GS 20	III & IIIA	200
83	Depot 706	DS/GS 30	III & IIIA	200
84	Depot 705	DS/GS 40	III & IIIA	200
85	Depot 708	DS/GS 50	III & IIIA	200
86	Depot 708	DS/GS 60	III & IIIA	170
87	Pipehead, CP–B201	Depot 701	III & IIIA	300
88	Pipehead, CP–B201	AT–2	III & IIIA	1,425
89	Pipehead, Depot 709	AT–5	III & IIIA	1,425
Total line items 1–89				30,730

Section VI. FIFTH REQUIREMENT

F–11. Situation

The situation is unchanged from that of the fourth requirement.

F–12. Requirement

Using the daily supply requirements tables F–3 and F–4, complete the blank supply requirements schematic for the period D+29 through D+35 (fig F–6) by entering the supply requirements of lines 1 through 89 in the appropriate blocks. In the absence of any origin or destination blocks, complete the schematic by drawing the appropriate circle, connecting line, and/or block for the requirement. After completing this requirement, refer to figure F–7 for the solution.

(Fig F–6 located in back of manual)

(Fig F–7 located in back of manual)

Section VII. SIXTH REQUIREMENT

F–13. Situation

You are still the chief movement plans supervisor under supervision of the chief of the plans and programs division of the movement control center. Now that you have completed the requirements schematic, you are ready to assign each requirement to a specific mode of transportation. This is best accomplished by preparing mode schematics. In preparing mode schematics, you will need to consider certain factors outlined below.

a. Rail Movement.

(1) Single-track rail operations can handle 10 trains per day. Double-track rail operations can handle 30 trains per day. The net train load per day is equal to 400 short tons per train.

(2) An average of three hospital trains will operate daily between the following points:

(*a*) Port 3 and AT–5.

(*b*) Port 3 and Depot 705.

(3) One combination passenger and hospital train will operate daily between Depot 701 and Depot 709.

(4) An inventory of rail rolling stock reveals a shortage of refrigerator and heavy duty flatcars. There are enough tank cars available at

the pipehead at Depot 709 to permit movement of the bulk petroleum requirement to AT–5.

(5) Only segments of the rail net are capable of double-track operations. The plans and programs division maintains up-to-date capabilities for all modes; this information should be posted on the overlay. Actual usable capability of the rail net is computed, based on the rail net system shown on the overlay and the track capacities as discussed above.

b. Highway Movement.

(1) The following highway units are available for employment along the lines of communication:

(*a*) Two heavy truck companies, each capable of 72,000 ton-miles per day.

(*b*) Three medium truck companies (petroleum), each capable of 67,500 ton-miles per day.

(*c*) Four medium truck companies (cargo), each capable of 54,000 ton-miles per day.

(*d*) Three light truck companies, each capable of 18,000 ton-miles per day.

(2) The above truck units are so positioned that they can handle the movement requirements allocated to them. Although some rail exists in the field army area, continuing guerrilla action makes its use unlikely at this time. Therefore, you must consider the use of highway transport. Highway distances are shown in figure F–8.

(Fig F–8 located in back of manual)

c. Air. Because of an impeding air operation against the aggressor, no air transport is available.

d. Inland Waterway. Inland waterway transport has been determined to be infeasible.

e. Other Considerations.

(1) You *must* consider the basic principles of movement and movement routing (SOLOG 27, app H), emphasizing the use of the most economical mode having the available capability and moving as far forward as possible. (Refer to paragraph 7–6*c* for a discussion of mode selection.)

(2) For this problem, movement requirements may be split between highway and rail, but transfer points will be established only to extend the rail net.

(3) For planning purposes, the rail and motor movement schematics show lines of communication in the same relative positions as they are shown in figure F–1.

F–14. Requirement

Using the rail movement blank schematic shown as figure F–9, prepare a rail movement schematic for those requirements that you determine should go by rail. Again, refer to paragraph 7–6*c* and table 7–1 for guidance in determining what goes by what mode. After you have completed your schematic, refer to figure F–10 for the solution.

(Fig F–9 located in back of manual)

(Fig F–10 located in back of manual)

Section VIII. SEVENTH REQUIREMENT

F–15. Situation

The situation remains unchanged from that for the sixth requirement.

F–16. Requirement

Using the daily highway movement blank schematic shown as figure F–11, prepare the highway movement schematic for the remaining supply requirements that must be moved by highway. Refer to figure F–8 for highway distances for computation of the ton-mileage. Below the blocks on the schematic, show totals of short tons and of ton-miles. After completing your computations, refer to figure F–12 for the solution.

Note. Bulk petroleum products must be computed separately because the type of vehicle required to transport bulk petroleum normally differs from that required to transport general cargo.

(Fig F–11 located in back of manual)

(Fig F–12 located in back of manual)

Section IX. EIGHTH REQUIREMENT

F–17. Feasibility of Highway Movement Plan

This requirement is, in effect, a feasibility test of your planning for highway movements. It is designed to determine whether the highway units available have the capability to move the tonnage that you have allocated to them. In

making this determination, remember that bulk petroleum and dry cargo capabilities and requirements must be computed separately. To test feasibility you require answers to the following questions:

a. Bulk Petroleum.

(1) Total capability for movement of bulk petroleum equals _____ ton-miles.

(2) Total requirements for movement of bulk petroleum equals _____ ton-miles.

b. General Cargo.

(1) Total capability for movement of general cargo equals _____ ton-miles.

(2) Total requirements for movement of general cargo equals _____ ton-miles.

c. Proof of Feasibility. In each of *a* and *b* above, if the total capability is equal to or exceeds the total requirements, the plan is feasible. After completing your computation for *a* and *b* above, refer to paragraph F–18 below for the solution.

F–18. Solution to Eighth Requirement

a. Bulk Petroleum. The capability for highway movement of bulk petroleum exceeds the movement requirements. Computations are as follows:

(1) From paragraph F–13*b*, we know that three medium truck companies (petroleum) are available, each having a daily capability of 67,500 ton-miles. Therefore,

67,500
×3
202,500 ton-miles capability

(2) Total bulk petroleum movement requirements in ton-miles (table F–4) are shown in table F–5.[a]

Table F–5. Total Bulk Petroleum Movement Requirements To Be Moved by Highway

Line	*Origin*	*Destination*	*Short tons*		*Miles*		*Ton-miles*
88	CP–B201	AT–2	1,425	×	12	=	17,100
87	CP–B201	Depot 701	300	×	42	=	12,600
81	Depot 709	DS/GS 10	200	×	50	=	10,000
82	Depot 706	DS/GS 20	200	×	66	=	13,200
83	Depot 706	DS/GS 30	200	×	57	=	11,400
84	Depot 705	DS/GS 40	200	×	41	=	8,200
85	Depot 708	DS/GS 50	200	×	52	=	10,400
86	Depot 708	DS/GS 60	170	×	52	=	8,840
79	Depot 706	DS/GS A	1,150	×	42	=	48,300
80	Depot 708	DS/GS B	1,150	×	24	=	27,600
Totals			5,195				167,640

(3) Total highway capability _____ 202,500 ton-miles
Less total highway requirements _____ 167,640 ton-miles
Excess capability _____ 34,860 ton-miles

b. General Cargo. The capability for movement of general cargo by highway exceeds the movement requirements as shown below.

(1) From paragraph F–13*b*, we know that the following general cargo movement capability exists:

Three light truck companies, each having a daily capability of 18,000 ton-miles:

18,000
×3
54,000 ton-miles capability

Four medium truck companies, each having a daily capability of 54,000 ton-miles:

54,000
×4
216,000 ton-miles capability

Two heavy truck companies, each having a daily capability of 72,000 ton-miles:

172,000
×2
144,000 ton-miles capability

Thus total capability equals 414,000 ton-miles

(2) Total general cargo requirements (in ton-miles) for movement by highway are shown in table F–6.

(3) Total highway capability _____ 414,000 ton-miles
Total highway requirements _____ 412,685 ton-miles
Excess highway capability _____ 1,315 ton-miles

[a] Line 89 from table F–4 is not included here because it was moved by rail

Table F–6. Total General Cargo Requirements To Be Moved by Highway

Origin	Destination	Short tons		Miles		Ton-miles
LOTS-Green	AT–1	415	×	33	=	13,695
LOTS-Red	AT–6	425	×	18	=	7,650
Port 3	AT–1	610	×	24	=	14,640
Port 1	AT–6	610	×	10	=	6,100
Depot 706	DS/GS A	1,215	×	42	=	51,030
Depot 708	DS/GS B	1,185	×	24	=	28,440
Depot 709	DS/GS 10	515	×	50	=	25,750
Depot 706	DS/GS 20	515	×	66	=	33,990
Depot 706	DS/GS 30	515	×	57	=	29,355
Depot 705	DS/GS 40	515	×	41	=	21,115
Depot 708	DS/GS 50	515	×	52	=	26,780
Depot 708	DS/GS 60	515	×	52	=	26,780
Depot 709	DS 100	320	×	62	=	19,840
Depot 706	DS 200	320	×	84	=	26,880
Depot 706	DS 300	320	×	65	=	20,800
Depot 705	DS 400	320	×	57	=	18,240
Depot 708	DS 500	320	×	65	=	20,800
Depot 708	DS 600	320	×	65	=	20,800
Total		9,470				412,685

Note. The above tonnages represent consolidations of tonnages that cannot be moved by rail (because of the absence of rail facilities) to ultimate destinations.

Section X. NINTH REQUIREMENT

F–19. Feasibility of Plan for Movements by Highway and Rail

The feasibility of the plan is tested by balancing the number of tons by class to be moved from ports and depots against the number of tons by class that are moved by rail and highway. If the number of tons to be moved balance the number of tons moved by each mode, the computations are correct and the plan is feasible.

F–20. Solution to Ninth Requirement

a. From Ports (Includes LOTS Operations).

	Requirements (short tons)	Movements	
		Rail (short tons)	Highway (short tons)
Class I (line items 1–12)	2,340	2,140	200
Class II and IV (line items 27–38)	6,400	5,380	1,020
Class V (line items 53–64)	7,960	7,120	840
Total	16,700	14,640	2,060

Thus:

14,640 short tons moved by rail
+2,060 short tons moved by highway
16,700 short tons moved balances 16,700 short tons required

b. From Depots.

	Requirements (short tons)	Movements	
		Rail (short tons)	Highway (short tons)
Class I (line items 13–26)	1,170		1,170
Class II and IV (line items 39–52)	870		870
Class V (line items 65–78)	5,370		5,370
Total	7,410		7,410
Class III (line items 79–89)	6,620	1,425[a]	5,195
Total	14,030	1,425	12,605

[a] Bulk petroleum that could not be moved by pipeline (line item 89 from table F–4).

Thus:

1,425 short tons moved by rail
+12,605 short tons moved by highway
14,030 short tons moved balances 14,030 short tons required

c. Total Requirements Balanced Against Movements by Origins.

16,700 short tons moved from ports (including LOTS operations)
+14,030 short tons moved from depots
30,730 short tons moved balances requirement to move 30,730 short tons (table F-4)

d. Total Tonnages by Mode.

(1) *Rail.*

14,640 short tons to be forwarded from ports (including LOTS operations)
+1,425 short tons to be forwarded from depots
16,065 short tons to be forwarded by rail

(2) *Highway.*

2,060 short tons to be forwarded from ports and LOTS operations
+12,605 short tons to be forwarded from depots
14,665 short tons to be forwarded by highway [1]

(3) *Total tonnages by rail and highway.*

16,065 short tons by rail
+14,665 short tons by highway
30,730 total short tons [1]

e. Line Items Shipped Balanced Against Requirements.

(1) *Rail*: 31 shipments including bulk petroleum—16,065 short tons

(2) *Highway:*

48 line item shipments other than bulk petroleum	412,685	ton-miles
10 shipments of bulk petroleum	167,640	ton-miles
Total	580,325	ton-miles
48 shipments other than bulk petroleum	9,470	short tons
10 shipments of bulk petroleum	5,195	short tons
Total	14,665	short tons

[1]Includes tonnages that went by rail as far as possible and were then moved to destination by highway.

(3) *Total tonnages by rail and highway:*

58 shipments by highway (includes bulk petroleum)	14,665	short tons
31 shipments by rail (includes bulk petroleum)	16,065	short tons
89 total shipments	30,730	total short tons

F-21. Validity of Movement Plan

To the question is the movement plan feasible, the answer is yes. There was a requirement to move a total of 89 shipments, totaling 30,730 short tons. As demonstrated in paragraph F-20 above, the mission has been accomplished.

Note. It is felt that some added discussion of petroleum movement is warranted in order to clear up any possible confusion. Table F-1 shows a total of 17,425 short tons of bulk petroleum to be moved forward. Of this, 13,955 short tons are moved by pipeline (fig F-5) leaving 3,470 short tons to be moved by other means. Of the 3,470 short tons, 1,425 are moved by rail, leaving 2,045 to be moved by highway. However, paragraph F-20 above shows that 5,195 short tons of bulk petroleum are moved by highway. This results from petroleum tonnages that are moved as far as possible by pipeline at which point those same tonnages are transferred to highway for movement to final destination.

F-22. Conversion of Movement Plan to Movement Program

Now that you have completed the schematics and have made a feasibility test, you are ready to prepare the movements program (para 7-8, chapter 7). All that is required is to add the mode to the daily supply requirements shown in table F-3.

APPENDIX G

COMPUTATION OF A HIGHWAY MOVEMENT

G-1. Situation

On 17 January, elements of the 439th Transportation Truck Battalion will move from the unit's present position to an area in the vicinity of Crossroad (CR) 106. The movement will consist of five serials, with the first and second serials made up of six march units each, the third and fourth of seven march units each, and the fifth of five march units as shown in *a* below. The start point (SP) is CR 97, and the release point (RP) is CR 106. The route of march is from CR 97, by way of CR's 99, 103, 104, and 105, to CR 106. The lead vehicle of the first serial will cross the start point at 0800 hours. The hours of darkness are from 1835 to 0630.

a. Organization of the Convoy. The convoy will be organized as follows:

Serials	*Unit*	*Number of vehicles*	*Number of march units*
First	2439th and 2440th Transportation Light Truck Companies	126	6
Second	2441st and 2442nd Transportation Light Truck Company	135	6
Third	2443rd and 2444th Transportation Light Truck Companies and Headquarters and Headquarters Detachment, 439th Transportation Truck Battalion	150	7
Fourth	2445th and 2446th Transportation Light Truck Companies (attached)	144	7
Fifth	2447th and 2448th Transportation Light Truck Companies (attached)	124	5

b. Applicable Standing Operating Procedures. The following instructions from the standing operating procedures published by the highway traffic headquarters apply:

(1) The rate of march during daylight hours is 24 kilometers in the hour.

(2) The density of vehicles during daylight hours is 12 per kilometer.

(3) The rate of march during hours of darkness is 16 kilometers in the hour.

(4) The density of vehicles during hours of darkness is 48 per kilometer.

(5) A 10-minute gap will be maintained between serials.

(6) A 2-minute gap will be maintained between units.

(7) When an enroute restriction is applied to the movement, a 15-minute safety factor will be allowed before and after the restriction.

c. Restrictions. The following restrictions are in effect on 17 January:

(1) CR 99 from 1100 to 1200
CR 105 from 1500 to 1530
CR 104 from 1510 to 1630
CR 105 from 1700 to 1830

(2) The fourth serial will halt in place at the 1500-to-1530 restriction at CR 105 and continue as soon as possible after the restriction.

(3) The head of the fifth serial will depart the start point as soon as possible in order to clear the restriction at CR 104. The fifth serial will stop at the 1700-to-1830 restriction at CR 105 and disperse vehicles in woods until the restriction is lifted.

Note. All computations in minutes resulting in a fraction are *raised* to the *next full minute;* kilometers are rounded to the *nearest tenth.* For example:

15.5 minutes = 16 minutes
15.3 minutes = 16 minutes
15.67 kilometers = 15.7 kilometers
15.55 kilometers = 15.6 kilometers
15.43 kilometers = 15.4 kilometers

G-2. Computing Time Distance of the Route

The first thing a planner needs to know is how long it will take a convoy to travel from the start point to the release point; in other words, time distance (TD) of the route.

a Formula. Find time distance by dividing the distance (D) from the start point to the release point by the rate of march (R); in other words, TD = D ÷ R.

b. Computation. Begin the computation by determining the road distance from start point to release point. The distances between crossroads are tabulated below:

	Kilometers
CR 97 to CR 99	24
CR 99 to CR 103	6
CR 103 to CR 104	9
CR 104 to CR 105	18
CR 105 to CR 106	18

Adding, the road distance is 75 kilometers. Paragraph G–1 above states that the lead vehicle will cross the start point at 0800, starting as a daylight move in open column formation. Therefore, the rate of march is 24 kilometers in the hour. Substituting in the formula TD = D ÷ R, TD = 75 ÷ 24, or 3⅛ hours. Since ⅛ hour is 8 minutes (7.5), the time distance is 3 hours 8 minutes if the entire 75 miles is traveled in daylight hours. Therefore, the first vehicle arrives at the release point at 1108 hours (0800 + 3 hours 8 minutes).

G–3. Computing the Road Space of the First Serial

Road space is the distance in kilometers along a road that the motor movement occupies.

a. Formula. Find the road space by first dividing the number of vehicles in the serial by the density (vehicles to the kilometer) and then adding the minutes in the time gaps (converted into hours by dividing by 60 minutes) multiplied by the rate of march:

$$\text{Road space} = \frac{\text{Number of vehicles}}{\text{Vehicle density}} + \left(\frac{\text{Time gaps}}{60 \text{ min}} \times \text{Rate}\right)$$

b. Computation. Paragraph G–1*a* shows 126 vehicles in the first serial. The rate of march is 24 kmih; the density, 12 vehicles per kilometer. The time gap is 2 minutes between march units. Because six march units make up the serial, there are five gaps making a total time gap in the serial of 10 minutes. Figure the road space for the first serial as follows:

$$\text{Road space} = \frac{126 \text{ (vehicles)}}{12 \text{ (density)}} + \left(\frac{10 \text{ min}}{60 \text{ min}} \times 24 \text{ kmih}\right)$$

$$= \frac{126}{12} + \left(\frac{10}{60} \times 24\right)$$

$$= 10.5 + 4, \text{ or } 14.5 \text{ kilometers}$$

G–4. Computing the Time Length of the First Serial

Time length is the number of minutes it takes a convoy or part of a convoy to pass a point. With 126 vehicles in the column, it is obvious that not all can leave the same place at the same time. Therefore, the planner must figure how long it will take all of them to move past the start point. The time length of the first serial is computed in the following subparagraphs.

a. Formula. Find time length by dividing road space by the rate of march and multiplying the answer by 60 minutes to convert the fraction of an hour to minutes:

$$\text{Time length} = \frac{\text{Road space}}{\text{Rate}} \times 60 \text{ minutes}$$

b. Computation. Take the road space figure computed in the preceding paragraph (14.5 kilometers) and put it in the formula as follows:

$$\text{Time length} = \frac{14.5 \text{ km}}{24 \text{ kmih}} \times 60 \text{ minutes} = 36.3 \text{ or } 37 \text{ minutes}$$

G–5. Computing Road Space and Time Length of the Second, Third, Fourth, and Fifth Serials

Using the same formulas and methods of computation as for the first serial, data for the remaining serials are computed as follows:

a. Second Serial.

$$\text{Road space} = \frac{135}{12} + \left(\frac{10}{60} \times 24\right)$$

$$= 11.3 + 4, \text{ or } 15.3 \text{ kilometers}$$

$$\text{Time length} = \frac{15.3}{24} \times 60$$

$$= \frac{918}{24}, \text{ or } 38.25, \text{ or } 39 \text{ minutes}$$

b. Third Serial.

$$\text{Road space} = \frac{150}{12} + \left(\frac{12}{60} \times 24\right)$$

$$= 12.5 + 4.8 = 17.3 \text{ kilometers}$$

$$\text{Time length} = \frac{17.3}{24} \times 60 = 43.2, \text{ or } 44 \text{ minutes}$$

c. Fourth Serial.

$$\text{Road space} = \frac{144}{12} + \left(\frac{12}{60} \times 24\right)$$

$$= 12 + 4.8, \text{ or } 16.8 \text{ kilometers}$$

$$\text{Time length} = \frac{16.8}{24} \times 60$$

$$= 42 \text{ minutes}$$

d. Fifth Serial.

$$\text{Road space} = \frac{124}{12} + \left(\frac{8}{60} \times 24\right)$$

$$= 10.3 + 3.2 = 13.5 \text{ kilometers}$$

$$\text{Time length} = \frac{13.5}{24} \times 60$$

$$= 33.7, \text{ or } 34 \text{ minutes}$$

G–6. Preparing the Road Movement Graph

Road movement graphs are time and space diagrams. After computing for a move, the planner can "see" it when he plots the move on a graph. This paragraph explains how to plot the move; figure G–1 is the graph of the move described in the preceding paragraphs of this appendix and should be referred to in carrying out the instructions that follow.

a. Designating Hours. Using a piece of graph paper, designate, from the lower left corner across the bottom of the graph, the number of hours needed for this movement. The computations in paragraphs G–2 through G–5 show that more than 12 hours are required to complete the move. Paragraph G–1*a* states that the first serial is to cross the start point at 0800. Now, start

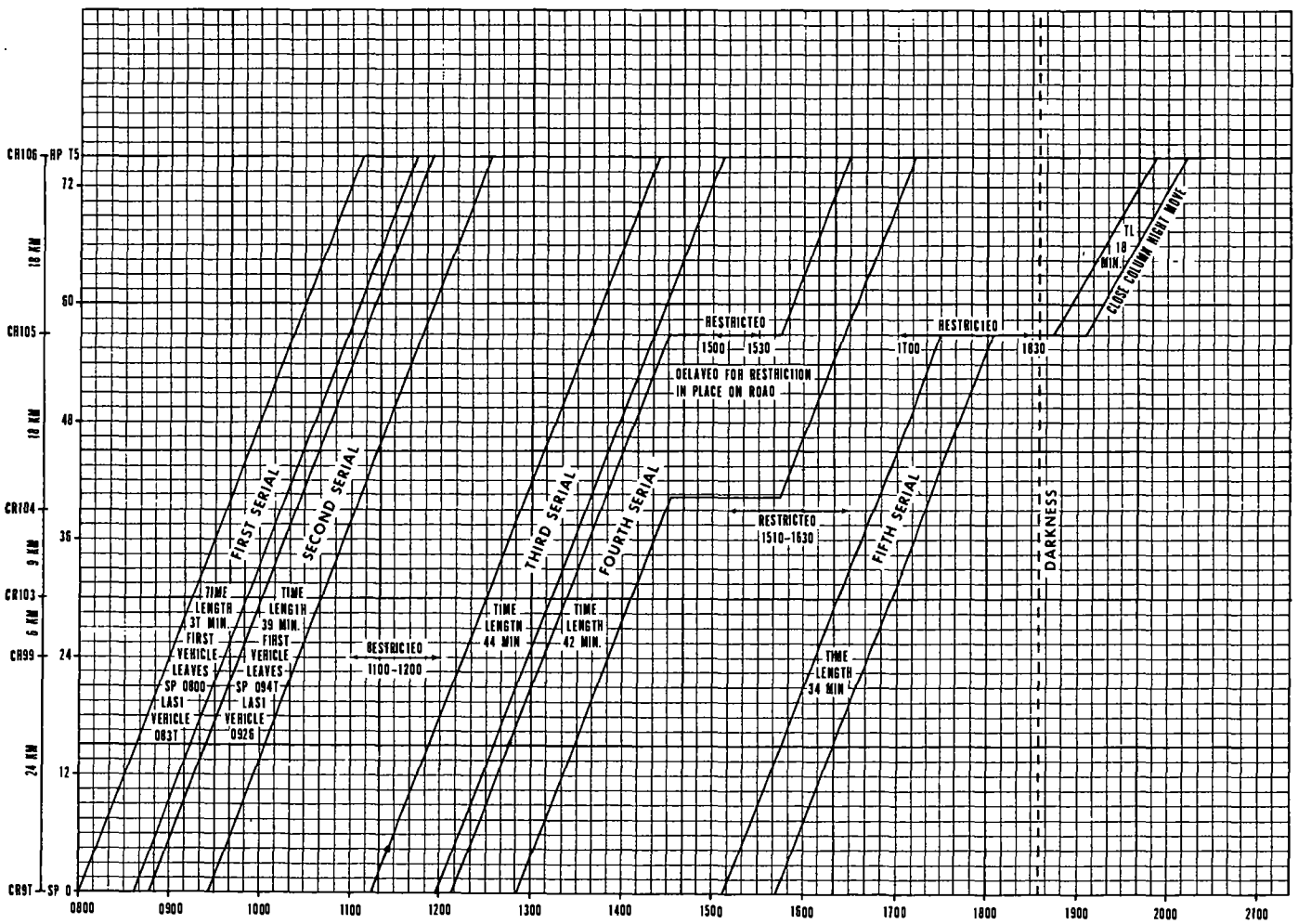


Figure G–1. Road movement graph for five serials.

in the lower left corner of the graph and write 0800. Each horizontal block represents 10 minutes. Count over six blocks (60 minutes), and the end of the sixth block will be the end of the first hour and the beginning of the second (0800 to 0900). Count over six more blocks to mark 1000 hours and continue counting and marking until 13 hours are indicated. In other words, the graph should now have 0800 in the bottom left corner and 2100 in the bottom right corner with six blocks separating each marked hour.

b. Designating Kilometers. On the same graph paper, indicate the distance to be moved in kilometers, beginning at the start point (SP) in the lower left corner of the graph and going up the left side to the release point 75 kilometers from the start point. Each vertical block represents 1.5 kilometers. The first number will be 0 in the left corner of the graph. Count up eight blocks for the 12-kilometer marker, eight more blocks to mark 24 kilometers, and so on. In the left margin of the graph paper (not on the graph itself), draw a line scaled to the kilometers on the graph. Show all critical, control, or other important points directly opposite the correct distance blocks of the graph. For example, CR 99 is 24 kilometers from the start point (CR 97) and is lettered on the scale exactly opposite the 24-kilometer line on the graph. CR 103 is lettered on the scale exactly opposite the 30-kilometer line, and so on with the other points up to CR 106, the release point, at the top of the scale directly opposite the 75-kilometer line on the graph.

c. Plotting the Restrictions. Mark within the graph all route reservations and restrictions. During this move, the first restriction is at CR 99 from 1100 to 1200 hours. CR 99 is 24 kilometers (16 blocks) from the start point. Determine where to mark the restriction by tracing the line from 1100 hours at the bottom of the graph straight up to the top of the sixteenth block. Because the restriction lasts 1 hour, extend the line horizontally for six blocks to the 1200-hour line. Now you have a straight horizontal line starting at the 1100 line and extending to the 1200 line directly opposite CR 99. The second restriction occurs at 1500 to 1530 hours at CR 105, the 57-kilometer point. Trace the line from 1500 up 38 blocks. Extend the line horizontally from 1500 over three blocks (30 minutes). Mark the third and fourth restrictions using the same procedure (para G–1*c*).

G–7. Graphing the First Serial

So far the hours, the kilometers, and the restrictions are marked on the graph. Now plot the movement of the head of the first serial. Paragraph G–1 states that the first vehicle of the first serial is to leave the start point at 0800. Computations in paragraph G–2 show the first vehicle is to arrive at the release point at 1108 hours. Put a dot at the beginning of the 0800 line in the left corner of the graph. Next, locate the 1108-hour line at the top of the graph (75-kilometer line) and put a dot there. Connect the two dots. Note that the line slants to the right from the 0800 line at the bottom to the 1108 line at the top. Remember, the time the first vehicle reaches the release point is found by adding the time distance (3 hours 8 minutes) to the time the first vehicle crosses the start point; this was computed in paragraph G–2. Now plot the tail (last vehicle) of the first serial to complete the picture. Add the time length to the time the first vehicle crosses the start point to find the time the last vehicle crosses the start point. Paragraph G–4 shows the time length of the first serial to be 37 minutes. Adding 37 minutes to 0800 gives 0837 as the time the last vehicle of the first serial leaves the start point. The time distance of 3 hours 8 minutes is added to this figure to compute the time the last vehicle is to reach the release point: 0837 plus 3 hours 8 minutes equals 1145 hours. Make a dot at the beginning of the 0837 spot on the bottom of the graph; make another dot at the top at 1145 hours. Connect the two dots; the resulting diagonal line parallels the line drawn to show the movement of the first vehicle of the first serial, with the distance between the two lines representing the 37-minute time length of the serial.

G–8. Graphing the Second Serial

Because the last vehicle of the first serial is to leave the start point at 0837 and since, according to paragraph G–1*b*(5), a 10-minute time gap exists between serials, the second serial will start at 0847. The time distance of the route is the same for the first and second serials since both are to travel 75 kilometers at 24 kilometers in the hour. To show the second serial on the graph, place a dot at 0847 hours on the bottom of the graph and make another dot at 1155 hours at the top of the graph (0847 + 3 hours 8 minutes (time distance of the serial)). These dots represent the start and release times of the head of the second serial. Connect the dots with a line. Complete the picture by adding the time length (paragraph G–5 shows the time length of the second serial as 39 minutes) to the starting time

and then placing a dot at the resulting 0926 hours—the time the tail of the second serial leaves the start point. Since the first vehicle arrived at the release point at 1155 and the time length is 39 minutes, the last vehicle will arrive at 1234 (1155 + 39). Put a dot on the top line at the spot representing 1234 hours; connect it with a line to the dot at 0926. The picture of the second serial is now complete.

G–9. Graphing the Third Serial

The third serial will not be able to leave 10 minutes after the second serial clears the start point since this would cause it to run into the 1100 to 1200 restriction at CR 99. Therefore, compute for the earliest time the first vehicle can leave to pass the restriction after it ends: 1200 hours (time the restriction ends) + 15 minutes (safety factor para G–1*b*(7) minus 1 hour (time distance to the restriction (24 km at 24 kmih)) = 1115 hours (earliest time the first vehicle of the third serial can leave the start point). Place a dot at the 1115-line on the graph. Since time length for this serial is 44 minutes, the last vehicle will leave the start point at 1159 hours. Time distance still 3 hours 8 minutes. Adding this to the starting time of the head and tail of the serial gives the arrival time of the head of the serial as 1423 hours and of the tail as 1507. Place dots at the times computed for this serial and connect them as you did with the two previous serials.

G–10. Graphing the Fourth Serial

Marking this serial's progress is more difficult than marking the preceding serials because it must halt at the 1500 to 1530 restriction at CR 105. First, compute the time distance (57 kilometers) from the start point to the restriction. Using the formula TD = D ÷ R, 57 ÷ 24 = 2 hours 23 minutes. If this serial leaves the start point 10 minutes after the last vehicle of the third serial cleared the start point, its starting time would be 1209. Adding the 2 hours 23 minutes to this time gives 1432 as the time when the fourth serial will arrive at CR 105. Adding the time length of the serial (42 minutes) to this gives 1514 as the time when the last vehicle of the serial would clear CR 105 if it moved on without stopping. Since the restriction at this point is from 1500 to 1530, the column must halt and cannot move on until 15 minutes (safety factor) after the restriction ends. Thus the serial begins moving again at 1545. The remaining distance of 18 kilometers will consume 45 minutes of traveling time (24 kmih), so the lead vehicle arrives at the release point at 1630. The tail vehicle leaves CR 105 42 minutes after the lead vehicle, or at 1627, and clears the release point 45 minutes later at 1712. Place dots and draw lines as shown in figure G–1 to show this move.

G–11. Graphing the Fifth Serial

a. Again, the 10-minute time gap between serials must be changed. There are two reasons for this. First, the fourth serial will be halted in place on the road for the second restriction and will therefore overlap into the time that the fifth serial would have arrived at CR 105 if it had left the start point 10 minutes after the last vehicle of the fourth serial did. Second, even if the fourth serial had not halted on the road, the fifth serial's lead vehicle would have arrived at the restriction at CR 104 at 1439 and the last vehicle would have cleared at 1513 (3 minutes after the restriction begins).

b. To compute the earliest time at which the lead vehicle of the fifth serial can leave the start point, we must first find how long it takes the vehicle to travel the 39 kilometers to CR 104: 39 ÷ 24 = 1 hour 38 minutes. The restriction at CR 104 is in effect from 1510 to 1630 and a 15-minute safety factor must be added to 1630 giving 1645 as the earliest time at which the lead vehicle of the serial can clear the restriction. Thus 1645 minus 1 hour 38 minutes gives 1507 as the earliest time at which the fifth serial can leave the start point. It clears CR 104 at 1645 without any necessity for halting and travels the intervening 18 kilometers to CR 105 in 45 minutes, arriving there at 1730. Since a 1700-to-1830 restriction is in effect at this point, the serial must halt and wait until 1845 (adding the 15-minute safety factor to 1830, the time at which the restriction ends) to resume movement. However, no "time bulge" shows on the graph for this restriction since the serial deploys, as ordered, into the woods and does not halt on the road while waiting for the restriction to end.

c. Note that the time length of the serial must be recomputed from this point since standing operating procedures specify that instructions for moving in darkness apply after 1835. Accordingly, the rate of march becomes 16 kilometers in the hour and vehicle density becomes 48 vehicles per kilometer. To find the time length we must first compute road space:

$$\text{Road space} = \frac{\text{Number of vehicles}}{\text{Vehicle density}} + \left(\frac{\text{Time gap}}{60 \text{ min}} \times \text{Rate}\right)$$

$$= \frac{124}{48} + \left(\frac{8}{60} \times 16\right)$$

$$= 2.6 + \left(\frac{2}{15} \times 16\right)$$

$$= 2.6 + \frac{32}{15}$$

$$= 2.6 + 2.2$$

$$= 4.8 \text{ kilometers}$$

Then

$$\text{Time length} = \frac{\text{Road space}}{\text{Rate}} \times 60 \text{ minutes}$$

$$= \frac{4.8}{16} \times 60$$

$$= 18 \text{ minutes}$$

Traveling at 16 kilometers in the hour, it takes the lead vehicle 1 hour 8 minutes to travel the remaining 18 kilometers to the release point. It thus arrives there at 1953 (1845 + 1 hour 8 minutes). The tail vehicle leaves CR 105 18 minutes later than the lead vehicle, or 1903, and arrives at the release point at 2011.

G-12. Road Movement Table

Data on a road movement graph are not in a form which can be readily used by operating units. Therefore, information is taken from the graph and put on an easily read table—a road movement table—and issued as an annex to the operation order for a road move. Serial and march unit commanders, as well as highway regulation, military traffic control point, and other similarly concerned personnel may be issued copies. Figure G-2① and G-2② illustrates the road movement table prepared from the road movement graph shown in figure G-1.

ROAD MOVEMENT TABLE

Serial	Date	Unit/formation	No. of vehicles	Load class of heaviest vehicles	From	To	Route	Route to start point	Critical points			Route from release point	Remarks
									Ref	Due (hrs)	Clear (hrs)		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)	(l)	(m)	(n)	(o)
1	23 Feb	2439 Trans Co (Lt Trk) 2440 Trans Co (Lt Trk)	126	21	CR 97	CR 106	A	N 28	CR 97 (SP) CR 99 CR 103 CR 104 CR 105 CR 106(RP)	0800 0900 0915 0938 1023 1108	0837 0937 0952 1015 1100 1145	N 16	
2	23 Feb	2441 Trans Co (Lt Trk) 2442 Trans Co (Lt Trk)	135	21	CR 97	CR 106	A	N 45	CR 97 CR 99 CR 103 CR 104 CR 105 CR 106	0847 0947 1002 1025 1110 1155	0926 1026 1041 1104 1149 1234	N 16	
3	23 Feb	2443 Trans Co (Lt Trk) 2444 Trans Co (Lt Trk) Hq & Hq Det 439th T Bn (Trk)	150	21	CR 97	CR 106	A	N 280	CR 97 CR 99 CR 103 CR 104 CR 105 CR 106	1115 1215 1230 1253 1338 1423	1159 1259 1314 1337 1422 1507	N 16	
4	23 Feb	2445 Trans Co (Lt Trk) 2446 Trans Co (Lt Trk)	144	21	CR 97	CR 106	A	N 4	CR 97 CR 99 CR 103 CR 104 CR 105 CR 106	1209 1309 1324 1347 1432 1630	1251 1351 1406 1429 1627 1712	N 53	Halt in place at CR 105 from 1432-1545 until restriction ends.
5	23 Feb	2447 Trans Co (Lt Trk) (attached) 2448 Trans Co (Lt Trk) (attached)	124	21	CR 97	CR 106	A	N 16	CR 97 CR 99 CR 103 CR 104 CR 105 CR 106	1507 1607 1622 1645 1730 1953	1541 1641 1656 1719 1919 2011	N 53	Stop at CR 105 from 1730-1845 and disperse vehicles in woods until restriction ends. Resume march in close column at 1845.

Figure G-2①. Road movement table (front).

ROAD MOVEMENT TABLE

MAPS:

1. AVERAGE SPEED.

   Serials 1-4 - 24 kmih
   Serial 5 - 24 kmih; after 1845 hours - 16 kmih

2. AVERAGE DENSITY.

   Serials 1-5 - 12 vehicles per km
   Serial 5 - 47 vehicles per km after 1845 hours

3. HALTS.

   Fourth serial at CR 105 - 1432-1545 hours
   Fifth serial at CR 105 - 1730-1845 hours

4. ROUTES:

   Route A

5. CRITICAL POINTS.

   a. Start Points:

      CR 97

   b. Release Points:

      CR 106

   c. Other Critical Points:

      CR 99
      CR 103
      CR 104
      CR 105

6. MAIN ROUTES TO START POINTS:

   N 28
   N 45
   N 280
   N 4
   N 16

7. MAIN ROUTES FROM RELEASE POINTS:

   N 16
   N 53

Figure G-2②. Road movement table (reverse side).

APPENDIX H

SOLOG AGREEMENT 27 (REVISED)

PRINCIPLES AND POLICIES OF MOVEMENTS

SOLOG AGREEMENT 27

(Revised)

DETAILS OF AGREEMENT

PRINCIPLES AND POLICIES OF MOVEMENTS

(Studies C17, C19, C35 and C36)

General Remarks

1. Standard terminology is not essential to this study.
2. Any standard terminology applicable to this study which later may appear to be desirable may be forwarded directly to the Military Agency for Standardization Terminology Coordinator for standardization consideration.

SOLOG Agreement

PART I—PRINCIPLES OF MOVEMENTS (C17)

The ABC Armies agree that the principles of movements are:
1. Control of movements will be centralized to the highest level at which it can be adequately exercised.
2. Movements will be regulated.
3. Movements will be fluid and flexible.
4. Maximum utilization will be made of carrying capacity.

PART II—MOVEMENTS* RELATIONSHIPS (C19)

The ABC Armies agree that:

1. The relationships between Movements* and the transport services will be:
   a. Movements* will decide the mode of transport necessary to implement the movements program.
   b. Movements* will allocate traffic by tonnage and destination.

2. The relationship with transport users will be:
   a. Movements* will be the agency to which all users of transport will go to obtain transport space.
   b. Movements* will be the intermediary between transport users and transport services, except local and/or internal hauls.

3. Movements* will decide, in accordance with Movements Plan, what

*The Q Movements Staff in the British Army.
The Transportation Movements Staff in the US Army.

will be moved, where it will be moved, when it will be moved, and the mode of transport, but not how the selected transport service will operate.**

PART III—MOVEMENT EMBARGOES (C35)

It is agreed among the ABC Armies that:
1. "Movement Embargoes" be adopted as the tripartite term for restrictions temporarily placed on traffic into and/or out of installations to permit clearance of or prevention of congestion.
2. Movement embargoes be placed only by authority of the commander cognizant of the effect of an embargo on overall logistical problems.
3. Movement embargoes be implemented through Movements* Staff channels.

PART IV—MOVEMENTS PRIORITIES (C36)

It is agreed among the ABC Armies that:
1. Movements Priorities are the order of precedence of movements within assigned allocation.
2. Overall policy for priorities is expressed by the theater command.
3. Movements personnel* interpret this policy and disseminate the necessary information to accomplish movements by means of detailed movements programs and instructions.

**In the case of British Road Movement, the Movements* Staff may issue instructions regarding routes, timings, etc.

APPENDIX I

SOLOG AGREEMENT 31 (REVISED)

MOVEMENTS DUTIES IN THE FIELD

SOLOG AGREEMENT 31
(REVISED)

DETAILS OF AGREEMENT

MOVEMENTS DUTIES IN THE FIELD

The Armies of the United States, United Kingdom and Canada agree to the following:

PART I—STANDING INSTRUCTIONS OC TROOPS (TRAIN) (STUDY C40)

1. The term "OC Troops (TRAIN)" will be adopted. However, the term "OIC Troops (TRAIN)" may be used by United States Forces, when desired.
2. In movements involving small units or casual personnel, the movement personnel at entrainment station appoint "OC Troops (TRAIN)," unless this officer has been appointed by higher headquarters.
3. The duties and responsibilities of the "OC Troops (TRAIN)" will include but not be limited to the following:
   a. During Entrainment:
      (1) Submits movement orders and/or authority to movements personnel.
      (2) Ensures by checking with Movements Control personnel that troops, baggage, vehicles and other equipment are loaded according to Movement Instructions.
      (3) Informs troops of location of "OC Troops (TRAIN)" compartment and medical facilities, if available.
      (4) Appoints one or more officers or NCO's as assistants and/or car commanders who will be appointed for every car.
      (5) Makes inspection of train facilities, arranges for security, and completes "Train Inspection Report" with movement control personnel and a railway representative.
   b. En route.
      (1) "OC Troops (TRAIN)" is at all times responsible for sanitary arrangements, the discipline and protection of the men on the train and will conform to instructions given by movements personnel or railway operating personnel. Operation of the train is the responsibility of railway personnel.
      (2) Discipline—Enforces orders prohibiting:
         (a) Detraining without permission.
         (b) Throwing anything out of windows.
         (c) Leaning out of windows or doors.
         (d) Marking or writing on railway equipment.

(e) Unauthorized use of inflammable equipment.
(f) Damaging railway equipment.
(g) Violation of security regulations.
(h) Waste of water in lavatories.
(i) Riding anywhere on trains except where authorized.
(j) Interference with railway operations.
(k) The use of intoxicating liquors during the journey.
(l) The unauthorized possession of live ammunition.

(3) Current standing instructions in the event of sickness, death or absence without leave will be observed.

(4) He will comply with all instructions received en route.

c. During Detrainment.

(1) Ensures by checking with movement control personnel that troops, baggage, vehicles and other equipment are unloaded according to Movement Instructions.

(2) Completes "Troop Inspection Report" and any necessary documentation.

PART II—TROOP TRAIN INSPECTION REPORT (STUDY C50)

The standard Troop Train Inspection Report contained in Appendix "A" will be adopted.

PART III—MOVEMENTS DUTIES IN THE FIELD (STUDY C47)

Movements** Personnel will be located in areas where personnel and/or freight movements originate, terminate or are diverted or reconsigned. They will perform the following functions:

1. Establish and maintain close relationship with service installations, i.e., depots, etc., and representatives of transport services in the area.
2. Maintain current information including location of local units, installations and depots, movement requirements, changes in movement capabilities, and status of the local transport situation.
3. Consolidate non-programmed movement requirements of local units, installations and depots, and arrange for transport services in connection therewith.
4. Supervise execution by users and operators of the movement program and/or movement instructions issued by the Movements Staff*.
5. Insure efficient use of transport capabilities allocated by the Movements Staff*.
6. Prepare plans when required for local employment of transport.
7. Effect reconsignment and diversion instructions as required by appropriate authority.
8. Preclude congestion by recommending to the Movements Staff* the establishment of priorities and/or embargoes or other appropriate actions.
9. Take necessary action upon receipt of:
   a. Information regarding the arrival and dispatch of traffic.
   b. Requests for information concerning the movement of traffic, losses/discrepancies, etc.
10. Advise local commanders on movement matters.
11. When required arrange itineraries, reservations, and the issue of the necessary travel documents for individuals and small groups.***
12. Insure adequate movements documentation.
13. Insure that all ordered security measures concerning movement of personnel and freight are complied with.
14. Perform such other movements** duties as may be prescribed by proper authority.

*Q Movements Staff in the British Army.
Transportation Movements Staff in the US Army.

**Movement Control in the British and Canadian Armies.
Transportation Movements in the US Army.

***Movement Control in the British and Canadian Armies.
Installation Transportation Officer in the US Army.

PART IV—MOVEMENT CHECK/**STANDARD TRACER (STUDY C54)

1. After a consignment enters the transportation system, within a theater of operation, the capability must exist for locating it at any time in order that it can be expedited, diverted, reconsigned or held intransit when occasioned by changes in the tactical or logistical situation, or of locating it in the event it is missing or does not reach its destination within a reasonable period of time. A standardized form is required for transmitting data to movements***personnel in the field so they can assist in locating consignments. This form to be known as a *Movement Check/**Standard Tracer.

2. The *Movement Check/**Standard Tracer normally will be prepared by the consignor or consignee and furnished to the local movements*** office who will in turn contact the transport service(s) involved in the move. The transport service will determine and report on the current status of the consignment.

3. The use of this code will facilitate transmission, by using "MOVCHECK/STDTRACER" followed by the letters representing the paragraphs below and the pertinent data.

a. Consignor and location.
b. Consignee and location.
c. Waybill or similar document number.
d. Means of transport and name/number of vessel/car or wagon/truck/lorry. (If truck/lorry, give designation of unit to which truck/lorry is assigned.)
e. Date loaded and dispatched.
f. Details of route.
g. Any identification numbers or marks known.
h. Commodity description.
j. Number of pieces.
k. Type container.
l. Total deadweight of consignment.
m. Total measurement weight of consignment.
n. Reference to movement program or instruction (as applicable).
p. Instructions when consignment is located (e.g., expedite, divert, reconsign, hold intransit and/or additional details as appropriate).
q. Remarks.

*In the British and Canadian Armies.

APPENDIX A

TROOP TRAIN INSPECTION REPORT

DATE _____

*UNIT IDENTIFICATION _____ TRAIN NO. _____

FROM _____ TO _____

(List ALL coach/car initials, numbers and damaged items. If nil, indicate).

COACH/CAR NO. & TYPE	CONDITION OF COACH/CARS PRIOR TO ENTRAINMENT (see reverse side)	CONDITION OF COACH/CARS AFTER DETRAINMENT (see reverse side)

Inspected prior to entrainment by:

(Signature)

1. Entrainment TO/MC Det** _____
2. OC Troops (Train)*** _____
3. Railway Inspector _____

Inspected after detrainment by:

(Signature)

1. Detraining TO/MC Det _____
2. OC Troops (Train) _____
3. Railway Inspector _____

REMARKS: Use reverse side for detailed explanation of cause of damage.

Inspection to be made by military personnel whether or not railway representative is available.

*When security regulations prohibit it, titles of units will not be shown and units will be described by their unit security serial number.

**Transportation Officer/Movement Control Detachment.

***To be signed by OC Troops (Train), or his representative, and should be the same officer making inspection at entraining and detraining points if possible.

(Reverse Side of Report)

INSPECTING PERSONNEL WILL CHECK THE FOLLOWING

1. Coach/car floors free from dirt and in sanitary condition.
2. Seats clean and free from tears.
3. No broken windows or doors.
4. Ventilators in proper order.
5. Lavatories in working order and properly supplied with water.
6. Toilets clear and sanitary: flushing apparatus in working order, and sufficient supply of toilet paper.
7. Water tanks filled (and iced if applicable). Extra water containers available in each coach/car.
8. Lighting fixtures in working order and coach/car properly lighted for night travel.
9. Platforms and steps of each coach/car safe and secure.
10. Passage used by passengers between coach/cars to be guarded by diaphragms/covered gangway; if not, arrangements to be made for equipping with chains or heavy ropes.
11. Emergency/communication cord.
12. Fire apparatus.

ADDED REMARKS

APPENDIX J

STANAG 2023

MARKING OF MILITARY CARGO FOR INTERNATIONAL MOVEMENT BY ALL INTERNATIONAL MEANS OF TRANSPORT

Agreed English/French texts STANAG 2023

DETAILS OF AGREEMENT (DofA)

MARKING OF MILITARY CARGO FOR INTERNATIONAL MOVEMENT BY ALL INTERNATIONAL MEANS OF TRANSPORT

Annexes: A(DofA). Location of Marks on Containers.
B(DofA). Handling and Storage Instructions (Not attached —still under preparation).

AGREEMENT

1. The NATO Armed Forces have agreed to standardize:
   a. Movement Marks (Annex A(DofA)).
   b. Handling and Storage Instructions (Annex B(DofA)).

on consignments of military cargo for international movement by all international means of transport, except where the move is national in character and is handled exclusively by that nation's means of transport.

PRINCIPLES

2. The principles followed in this STANAG, and which will apply to subsequent amendments and supplements, are as follows:

a. Subject to over-riding security considerations, the system of markings should be the same in peace as in war.

b. The system must comply, in so far as practicable, with commercial requirements.

c. Existing international and NATO Standardization Agreements should be observed where obligatory, and made use of where practicable, in preference to devising new standards, symbols, etc.

d. The STANAG concerns those marks which are essential information to personnel handling cargo in transit. Other marks of distinct national interest are permitted insofar as they do not detract from the clarity of the essential markings.

e. All marks should be made in BLACK except where another colour will provide greater clarity or in specifically prescribed.

f. All marks should be simple so that they can be readily applied to a consignment and easily recognized for sorting purposes.

g. In the case of air-dropped supplies, the provisions of STANAG 3427 regarding the colour identification code will apply.

h. Measurements are expressed in the metric system, and if these

are not the normal units of the consignor or consignee, in feet and inches also. They are to be rounded up to the next centimetre or inch.

i. In the case of transport of vehicles, STANAGs 2153 and 2163 apply.

DEFINITIONS

3. a. Shipping Containers. This is a container which is sufficiently strong by reason of material, design and construction to be shipped safely without further packing either as a primary pack or as an outer container for consumer packages (interior containers). Examples: Wooden boxes or crates; fibre, plywood and metal drums; corrugated and solid fibre boxes (1); multi-wall paper shipping sacks, textile shipping bags, etc.

NOTE: (1) In the remainder of this STANAG the word "container" is used.

b. Gross Weight. The gross weight is to indicate the weight of the container and its contents, including all packaging material. The abbreviation for Gross Weight is WT.

c. Outside Dimensions. These are the external dimensions of the containers, including all projections ("overall" dimensions).

d. Commodity Mark. This is a symbol which broadly classified the content of a container.

MOVEMENT MARKS AND LABELS

4. Subject to overriding security considerations, the following movement marks and labels are to appear on containers as shown in Annex A(DofA). When a large number of containers containing the same type of material are dispatched by one consignor, to one destination, providing they form part of a single consignment, only 10% of the total number of containers need bear the markings specified. If the consignor so wishes, the unmarked containers may bear the identification number, followed by a serial number within the consignment:

a. Consigning Nation. The National Distinguishing Letters given in STANAG 1059 are to be placed OUTSIDE and to the LEFT of a rectangle containing the consignment Identification Number.

b. Identification Number. The consignment Identification Number, as laid down by the consigning nation, is to be contained in a rectangular frame.

c. Port of Discharge. The sea port or air port of discharge is to be shown in clear.

d. Consignee Unit. The consignee's address is to be shown in clear.

e. Weights and Dimensions. The following are to be marked on containers as appropriate and/or necessary:

(1) Gross Weight.

(2) Cube.

(3) Outside dimensions: Length, Width, Height. The only outside dimensions to be shown are for containers having any single dimension of 1.8 metres (72 inches) or more.

f. Container Numbers. Consignments consisting of a number of related containers are to be marked by the use of two numbers separated by an oblique stroke. The first number will indicate the individual container, the second will indicate the total number of containers (e.g. 6/12).

g. Priority Marks. The degree of national priority allocated to a consignment and the priority marks applied will be in accord with an internationally agreed system. In the absence of such an international prior-

ity system, the degree of priority desired will be indicated by the consignor, according to his own national system.

h. Commodity Identification. Commodity (item) identification will be by NATO Stock Number, Commodity Mark or nomenclature, in accord with the normal procedures of the consignor.

i. Special Cargo Labels. The labels specified in the International Conventions listed in the related documents are to be used for dangerous cargos.

HANDLING AND STORAGE INSTRUCTIONS

5. a. With regard to the handling and storage of consignments, no symbols are given in this instruction, as appropriate symbols are being adopted by the International Standards Organization (ISO). When these are ratified they will be issued as Annex B to the Details of Agreement of this STANAG.

b. The point of balance shall be marked by a vertical line not less than 3 inches (7.6 centimeters) long, painted from the bottom edge of both sides of containers over 10 feet (3 metres) in length or those which are unbalanced. The letters "C.G." shall be stencilled or printed immediately above or alongside of this mark.

LOCATION OF MARKS ON CONTAINERS

6. a. Commodity (item) identification is to be shown on one side and address markings are to be shown on the opposite side of containers with a volume equal to or less than 10 cubic feet (280 litres). Additionally, when the volume of the container is more than 10 cubic feet (280 litres), both commodity identification and address markings will be shown on the end of the container to the right when facing the side showing address markings. The opposite end and the top and bottom shall be used only for special cargo markings or labels required to be placed there by law, international agreement or regulations of the consignor, are necessary for safe handling. Other special cargo markings as required, to include handling and storage instructions not otherwise displayed, shall be shown on or attached to one side of the container, preferably the side showing commodity identification.

b. Containers which are non-parallel sided are to be marked in at least one location with commodity identification and address markings.

c. The position of markings or labels is shown in Annex A(DofA)–1 to –3. The detailed mandatory and optional composition of commodity identification and address markings is shown in Annex A(DofA)–4.

d. Where there are no surfaces suitable for stencilling, weatherproof tags or labels are to be used.

e. The position of the markings: weight (WT) and cubic capacity (CU) shown on the sketch attached to Annex A does not apply to ammunition packages. Details of ammunition markings are given in STANAGs 2316 and 2322.

DOCUMENTS

7. Documents and detailed lists of contents are to be firmly attached to the outside of at least one container, of any consignment, if the nature of the container permits. Otherwise the documents and lists are to be placed inside the container or containers.

IMPLEMENTATION OF THE AGREEMENT

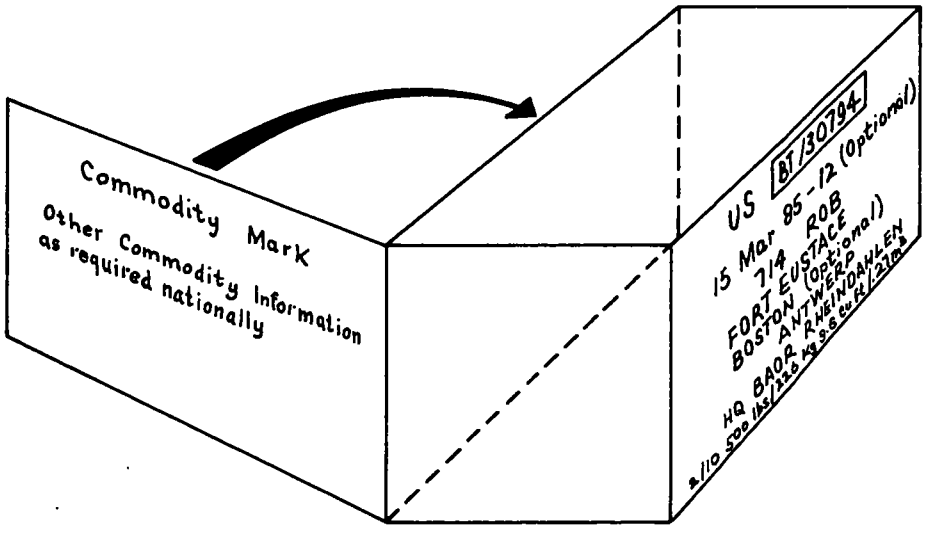
8. This STANAG will be considered to have been implemented when the necessary orders/instructions to adopt the method described in this Agreement have been issued to the forces concerned.

ANNEX A TO THE DETAILS OF AGREEMENT OF STANAG 2023

LOCATION OF MARKS ON CONTAINERS

Fig. A

Container with volume up to 10 cu ft (280 litres)



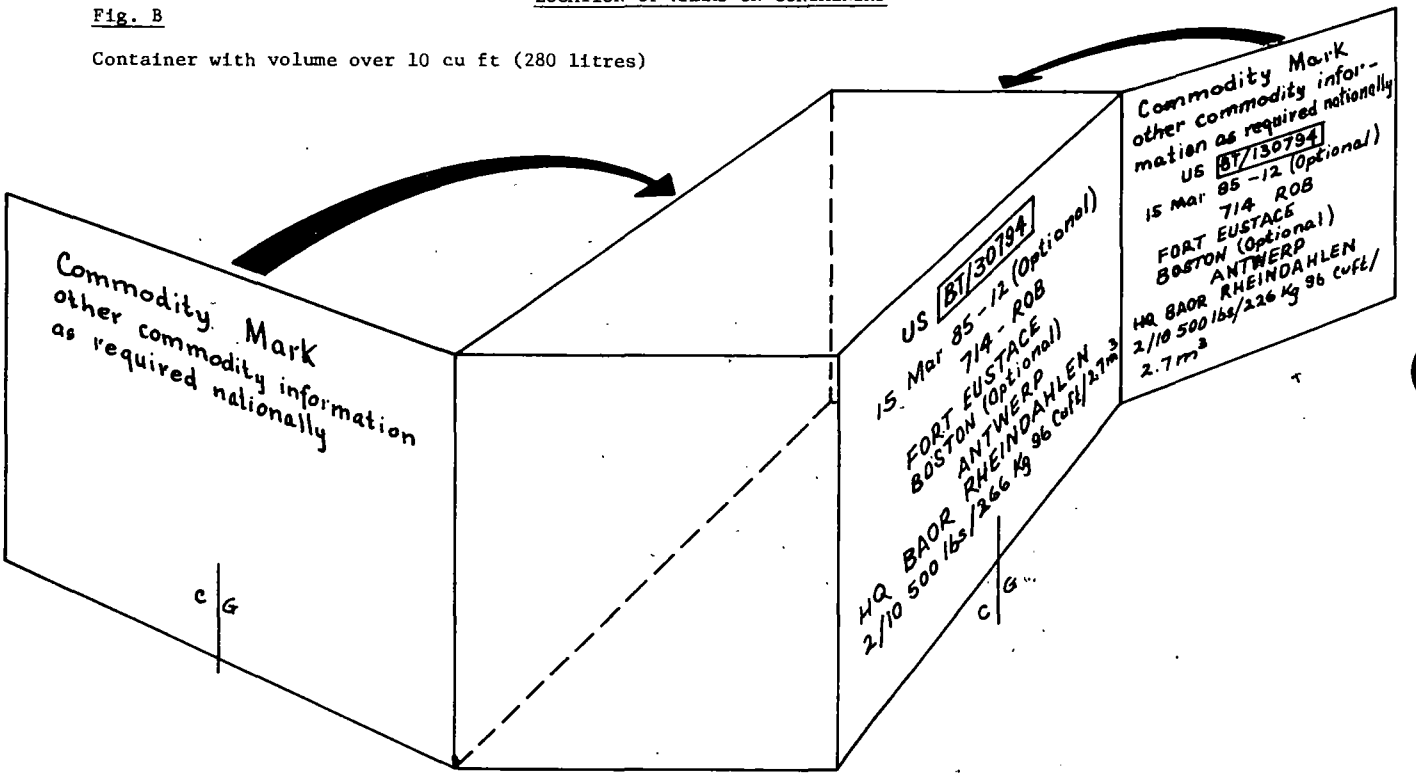
A(DofA) - 1

ANNEX A TO THE DETAILS OF AGREEMENT OF STANAG 2023

LOCATION OF MARKS ON CONTAINERS

Fig. B

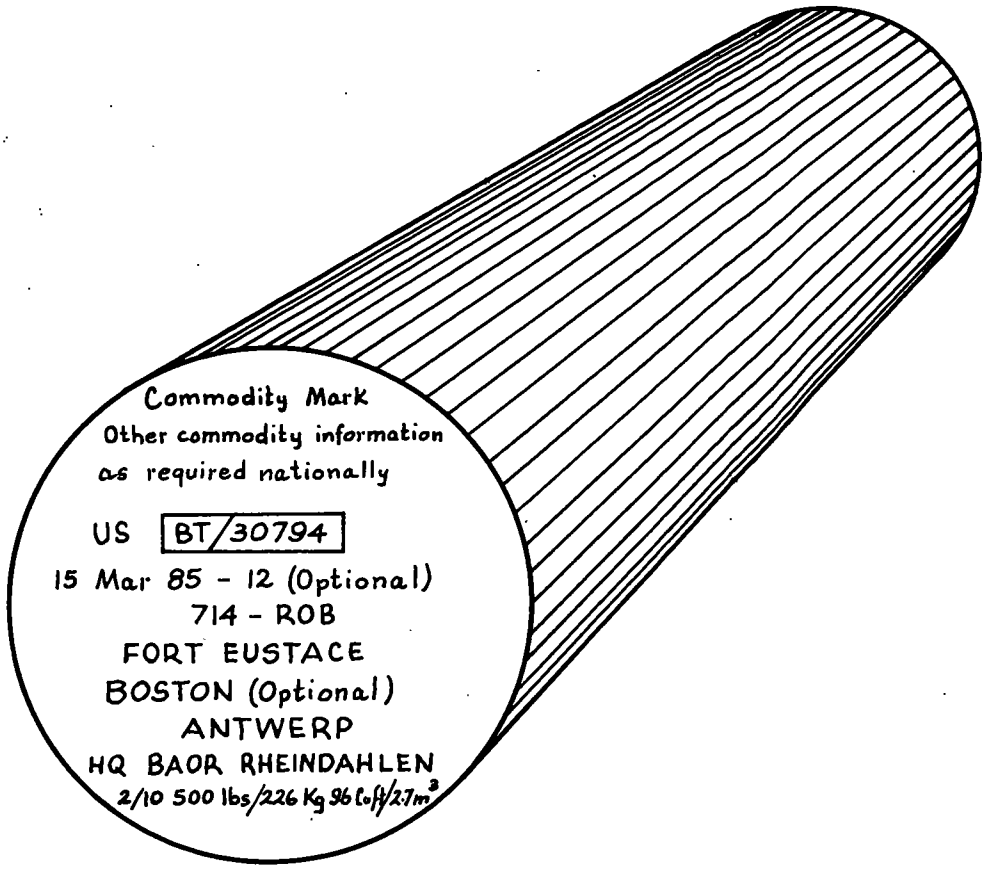
Container with volume over 10 cu ft (280 litres)



ANNEX A TO THE DETAILS OF AGREEMENT OF STANAG 2023

Fig. C

Non-parallel sided container



"COMMODITY IDENTIFICATION" FORMAT

LINE 1	:	Commodity (item) Identification by nomenclature. NATO Stock Number, and/or Commodity Mark according to National System of consignor.
LINES 2, 3 etc.	:	Other Commodity information as required nationally.

"ADDRESS MARKING" FORMAT

LINE 1	:	Consignment (Shipment) Identification Number.
LINE 2	:	Required Delivery Date and Project Code (optional) and Priority Mark.
LINES 3 AND 4	:	From Consignor.
LINE 5	:	From Port of Embarkation (optional).
LINE 6	:	Via Port of Discharge (if applicable).
LINE 7	:	To Consignee.
LINE 8	:	Unit Number, Total Units, WT each Unit, Cube each Unit.

APPENDIX K

STANAG 2041 AND SOLOG AGREEMENT 51

PART ONE TO APPENDIX K

STANAG 2041 (EDITION NO. 3)

OPERATION ORDERS FOR ROAD MOVEMENT AND ROAD MOVEMENT TABLES AND GRAPHS

Agreed English/French texts STANAG 2041 (Edition No. 3)

DETAILS OF AGREEMENT (DofA)

OPERATION ORDERS FOR ROAD MOVEMENT AND ROAD MOVEMENT TABLES AND GRAPHS

Annexes: A(DofA). Example of an Operation Order for Road Movement.
B(DofA). Specimen Road Movement Table.
C(DofA). Example of a Road Movement Graph.

AGREEMENT

1. The NATO Armed Forces agree to use the standard layouts for operation orders for road movement, road movement tables and graphs, as given in Annexes A to C(DofA). The instructions given in subsequent paragraphs are in amplification of these layouts.

DEFINITIONS

2. These definitions are taken from the NATO Glossary of Military Terms in English and French (AAP-6) and are repeated for convenience:

a. Warning Order. A preliminary notice of an order or action which is to follow. It is designed to give subordinates time to make necessary plans and preparations.

b. Operation Order. A directive, usually formal, issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation.

c. Standing Operating Procedures. Set of instructions covering those features of operations which lend themselves to a definite or standardized procedure without loss of effectiveness. The procedure is applicable unless prescribed otherwise in a particular case. Thus the flexibility necessary in special situations is retained.

d. Standing Order. Promulgated order which will remain in force until amended or cancelled.

GENERAL

3. Warning orders and operation orders are the primary means of effecting a road movement. Much detail can be eliminated from these orders by the use of standing operating procedures and standing orders for road movement.

a. Warning Orders. These orders are issued when required and should

include sufficient data to alert troops for movement and to allow subordinate commanders to make preliminary plans. The amount of detail included will depend on the military and traffic situation, the state of training of the troops and the extent to which standing orders/standing operating procedures have been developed.

b. Operation Orders for Road Movement. Whenever possible, detailed orders should be issued in the form of operation orders for road movement, in conformity with STANAG 2014 and Annex A. Annexes to the orders may include road movement tables and/or road movement graphs (See Annexes B and C).

c. Standing Operating Procedures and Standing Orders. These instructions should contain information on techniques, drills and procedures which are likely to be constant under any conditions. Properly developed, they will help to avoid unnecessary repetition of detail in orders. Some headings that may be used in preparing Standing Operating Procedures and Standing Orders are:

(1) Composition and duties of advance party.
(2) Vehicle loads, including personnel.
(3) Grouping of vehicles and group commanders.
(4) Organization of columns.
(5) Sign-posting and traffic control.
(6) Responsibilty for manning start point and release point.
(7) Discipline; halts; lighting.
(8) Action in the event of enemy attack.
(9) Drill for establishing headquarters on arrival.
(10) Responsibility for issue of operation orders for movements for headquarters.
(11) Safety measures.

ROAD MOVEMENT TABLES (See Annex B(DofA))

4. a. Road movement tables will consist of two parts; one giving "data" paragraphs reflecting general information common to two or more columns (or elements of column), the other listing the columns (or elements of column), together with all other necessary information arranged in tabular form.

b. These afford a convenient means of transmitting to subordinates their schedules and other essential detail pertaining to road movement. This is particularly so in cases when the inclusion of such detail in the body of the operation order would tend to complicate it or make it unduly long.

c. They will frequently require a wider distribution than a normal operation order so that copies can be issued to movement control personnel, traffic posts, etc.

d. Their security classification will be based on content and need not necessarily be the same as that of the operation order for road movement.

ROAD MOVEMENT GRAPHS (See Annex C(DofA))

5. General.

a. Road movement graphs are used by staffs in planning, supervising and regulating complicated movements and for providing a convenient means of recording actual moves of units over a period.

b. The unit of measure to be used, i.e. kilometres or miles, will depend on the requirements of the authorities concerned. However, the resulting orders and instructions should not contain a mixture of units except where both are shown throughout, e.g. 5 miles/8 kilometres.

6. Extra Time Allowance

a. Within a column moving under one movement number, an extra time allowance of one minute per 25 vehicles is always allotted above the calculated pass time.

b. If in a column the number of vehicles is over 600, the extra time allowance allotted will be two minutes per 25 vehicles.

7. Gaps between Columns. Between columns having different movement numbers, no standard gaps are prescribed; these gaps are allotted by the staff ordering the movement.

IMPLEMENTATION

8. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the procedures detailed in this Agreement into effect have been issued to the forces concerned.

ANNEX A TO THE DETAILS OF AGREEMENT OF STANAG 2041
(EDITION NO. 3)

FORMAT OF AN OPERATION ORDER FOR ROAD MOVEMENT
(See STANAG 2014)

(Headings, intended as a guide only)

(SECURITY CLASSIFICATION)
(Change from Oral Orders, if any)

Copy No. . . . of . . . . . copies
Issuing Headquarters
Place of Issue (may be in code)
Date-Time Group of Signature
Message Reference No.

Operation Order for Road Movement No. . . . . .
References: A. Maps, tables and relevant documents.
B.
Time Zone used throughout the Order:

1. SITUATION
   a. Enemy Forces
   b. Friendly Forces
   c. Attachments and Detachments
   d. Commanders Evaluation (optional)

2. MISSION

3. EXECUTION
   a. General
   b. Co-ordinating Instructions
      (1) Order of March
      (2) Routes
      (3) Density
      (4) Speed
      (5) Method of Movement
      (6) Defence on Move
      (7) Start, Release or Other Critical Points
      (8) Convoy Control
      (9) Harbour Areas
      (10) Instructions for Halts
      (11) Lighting
      (12) Air Support
   c. Detailed Timings

4. SERVICE SUPPORT
   a. Traffic Control
   b. Recovery
   c. Medical
   d. Petrol, Oil and Lubricants
   e. Water

5. COMMAND AND SIGNALS
   a. Commander/s
   b. Communications
   c. Position of Key Vehicles

Signature Block
Acknowledgment Instructions:
Authentication:
Annexes:
Distribution:

(SECURITY CLASSIFICATION)

ANNEX B TO THE DETAILS OF AGREEMENT
OF EDITION NO. 3 TO STANAG 2041

SPECIMEN ROAD MOVEMENT TABLE

(A guide only, will need adjustment to suit individual cases)

(SECURITY CLASSIFICATION)

Copy No.
Issuing HQ
Place of Issue
Date-Time Group of Signature
Message Reference No.

Annex B - "Movement Table" to Operation Order for Movement No.
Map:

General Data:
1. Average Speed
2. Traffic Density
3. Halts
4. Routes (i.e. between Start Points and Release Points)
5. Critical Points (See NOTE 4)
   (a) Start Points
   (b) Release Points
   (c) Other Critical Points
6. Main Routes to Start Points (See NOTE 7)
7. Main Routes from Release Points (See NOTE 7)

} Connect with paragraph 4.a. of Details of Agreement. These routes and points are here described by grid references, codewords, etc., and, if necessary, numbered or lettered for ease of reference in the columns below.

Movement Number	Date	Unit/Formation	No. of vehicles	Load Class of Heaviest Vehicles	From	To	Route	Route to Start Point (See Note 7)	Critical Points			Route from Release Point (See Note 7)	Remarks
									Ref.	Due (hrs)	Clear (hrs)		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)	(l)	(m)	(n)	(o)
(See NOTE 5)													

Acknowledge
Distribution:
Authentication:

(SECURITY CLASSIFICATION)

B(DofA)-1

NOTES:

1. Only the minimum number of headings above should be used. Any information which is common to two or more movement numbers should be included under the 'data' paragraphs.

2. As the table may be issued to personnel concerned with control of traffic, the security aspect must be remembered. It may not be desirable to include dates or location.

3. If the table is issued by itself, and not as an annex to a more detailed order, the table must be signed or authenticated in the normal way.

4. 'Critical Point' is defined as 'a selected point along a route used for reference in giving instructions. It includes start points, release points and other points along a route where interference with movement may occur or where timings are critical'.

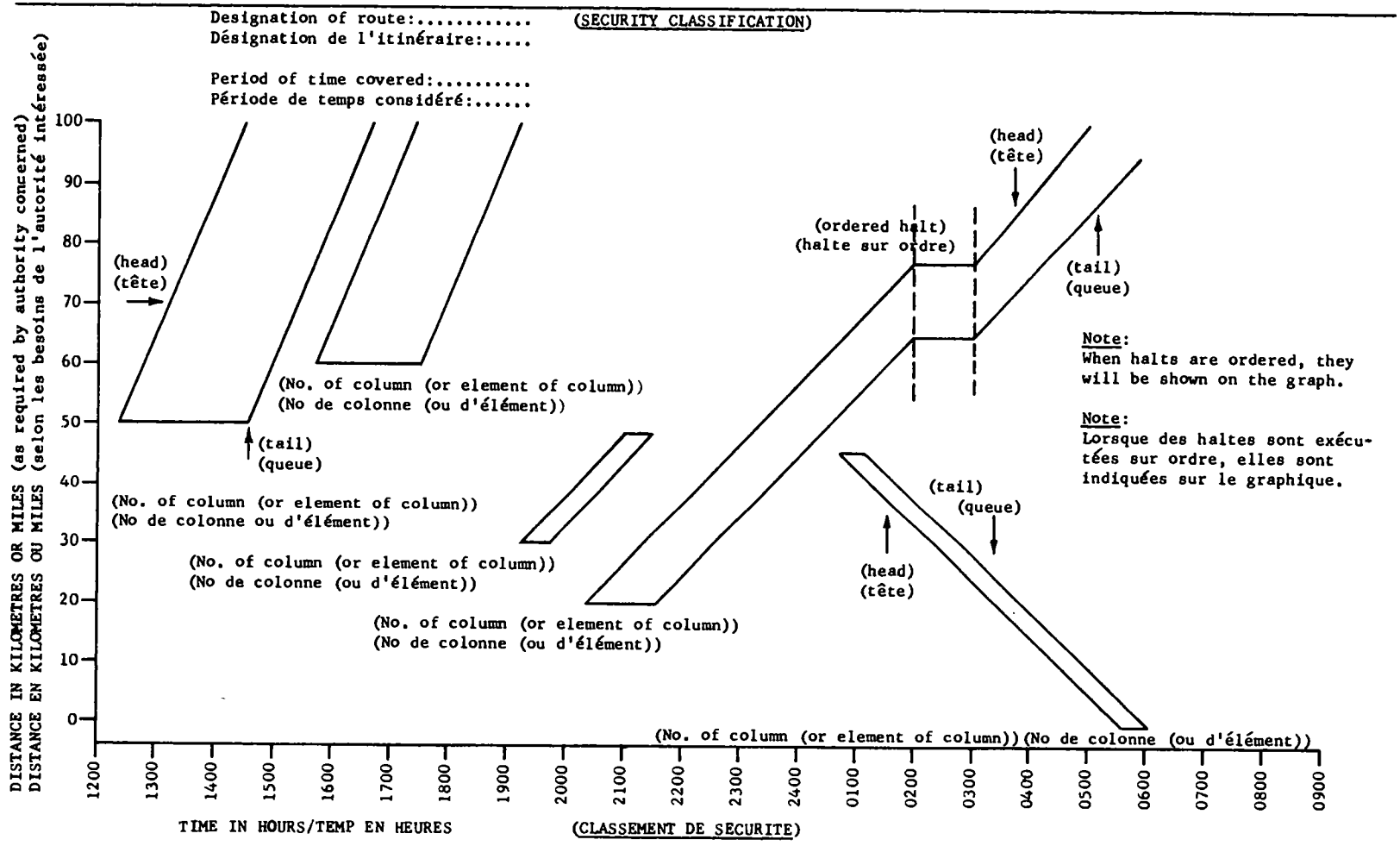
5. This will be the number which is used to identify a column (or element of column) during the whole of the movement (see STANAG 2154, paragraphs 8 and 9).

6. In the case of an annex having the same distribution as an operation order it will not be necessary to include the headings and endings as shown on this page.

7. Definitions of these terms will be found in STANAG 2154 (paragraphs 17 and 18).

ANNEX C (DofA) TO STANAG 2041 (Edition No. 3)
ANNEXE C (MdeA) AU STANAG 2041 (Edition No. 3)

EXAMPLE OF A ROAD MOVEMENT GRAPH
MODELE DE GRAPHIQUE DE MOUVEMENTS PAR VOIE ROUTIERE



C(DofA/MdeA)-1

PART TWO TO APPENDIX K

SOLOG AGREEMENT 51

OPERATIONAL ROAD MOVEMENT ORDERS, TABLES AND GRAPHS

SOLOG AGREEMENT 51

DETAILS OF AGREEMENT

OPERATIONAL ROAD MOVEMENT ORDERS, TABLES AND GRAPHS
(Study B3)

The Armies of the United States, United Kingdom and Canada agree to adopt STANAG 2041, "Operational Road Movement Orders, Tables and Graphs," in the ABC Nonmateriel Standardization Program and, in addition, agree to use the following movement procedures:

1. HALTS

a. Short Halts

(1) The observance of routine short halts will be at the discretion of the Commander controlling road movement over the route in question.

(2) Short Halts when specifically ordered will normally be of 10 minutes duration and will be made after each 110 minutes running.

b. Long Halts

(1) No standard rules for the observance of long halts are laid down since the existence of cover from the air and the need for refuelling are most important factors.

(2) Long halts must always be specifically ordered and plotted on movement graphs.

(3) Particular attention will be paid to the following aspects of traffic discipline at long halts:

(a) Columns should be halted at points providing a clear view; normally more than 200 yards should be maintained to the front and rear of the column. If road conditions prevent adequate sight distances, steps must be taken to forewarn approaching traffic.

(b) Guards, warning flags, or caution lights or flares (security permitting) should be posted in the front and rear of the column and at any other points where there is a hazard to passing traffic. If the column blocks part of the road at the halt so that it is necessary to operate alternating one-way traffic, authorized traffic movements may be alternated by using flags transmitted alternately from one end of the single lane to the other by the last vehicle of each passing traffic group, or by guards to control traffic first in one direction and then in the other.

(c) When the column halts so as to force traffic proceeding in the same direction to cross the centerline of the road, vehicles should be parked with enough distance to permit passing vehicles to enter the column in case traffic in the opposite direction is encountered.

(d) Unless otherwise prescribed, when traffic approaches from the rear of the halted column and cannot clear the column before its resumption of movement, officers may require such traffic to remain behind until it is safe to pass.

(e) All personnel other than traffic guides must remain off the road and keep the travelled portion of the roadway clear at all times.

2. MOVEMENT RATES AND/OR AVERAGE SPEED

It is not feasible to standardize movement rates and/or average speeds. Commanders will prescribe these for planning and training purposes within their own areas of responsibility.

3. EXTRA TIME ALLOWANCE

a. Within serials extra time will be allowed on the basis of one minute per twenty-five vehicles. This extra time allowance will be included in the "Time Past a Point/Time Length" of each serial.

b. Between serials no standard extra time allowance is prescribed. This will be determined and allocated by the staffs responsible for movement.

APPENDIX L

STANAG 2113

DESTRUCTION OF MILITARY TECHNICAL EQUIPMENT

Agreed English/French Texts STANAG 2113

DETAILS OF AGREEMENT (DofA)

DESTRUCTION OF MILITARY TECHNICAL EQUIPMENT

Annex: A(DofA) Priorities for Destruction of Parts of Military Technical Equipment.

AGREEMENT

1. The NATO Army Forces agree:

a. That it is essential to destroy to the maximum degree possible military technical equipment, abandoned in wartime operations, to prevent its eventual repair and use by the enemy.

b. To follow the principles and priorities, set forth in this Agreement, in the destruction of their own equipment, when requirement.

PRINCIPLES AND PRIORITIES

2. Detailed Methods. Detailed methods of destroying individual items of equipment are to be included in the applicable technical publications, user handbooks and drill manuals.

3. Means of Destruction. Nations are to provide for the means of destruction for their own equipment.

4. Degree of Damage.

a. General. Methods of destruction should achieve such damage to equipment and essential spare parts that it will not be possible to restore the equipment to a usable condition in the combat zone either by repair or cannibalization.

b. Classified Equipment. Classified equipment must be destroyed in such degree as to prevent duplication by, or revealing means of operation or function, whenever possible, to the enemy.

c. Associated Classified Documents. Any classified documents, notes, instructions, or other written material pertaining to function, operation, maintenance, or employment, including drawings or part lists, must be destroyed in a manner to render them useless to the enemy.

5. Priorities for Destruction.

a. Priority must always be given to the destruction of classified equipment and associated documents.

b. When lack of time and/or stores prevents complete destruction of equipment, priority is to be given to the destruction of essential parts, and the same parts are to be destroyed on all like equipment.

c. A guide to priorities for destruction of parts for various groups of equipment is contained in Annex A(DofA) to this STANAG.

6. Equipment Installed in Vehicles. Equipment installed in vehicles

should be destroyed in accordance with the priorities for the equipment itself, taking into account the relative importance of the installed equipment and the vehicle itself.

7. Spare Parts. The same priority, for destruction of component parts of a major item necessary to render that item inoperable, must be given to the destruction of similar components in spare parts storage areas.

8. Cryptographic Equipment and Material. The detailed destruction procedure to be followed in order to ensure the rapid and effective destruction of all types of cryptographic equipment and material is to be specified in instructions issued by the appropriate communication security authority.

9. Authorization. The authority for ordering the destruction of equipment is to be vested in the divisional and higher commanders, who may delegate authority to subordinate commanders when the situation requires.

10. Reporting. The reporting of the destruction of equipment is to be done trough command channels.

IMPLEMENTATION OF THE AGREEMENT

11. This STANAG will be considered to have been implemented when the priorities indicated therein have been incorporated in national documents detailing the method required for destroying the equipment concerned.

ANNEX A (DofA) TO
STANAG 2113

PRIORITIES FOR DESTRUCTION OF PARTS OF MILITARY TECHNICAL EQUIPMENT

EQUIPMENT	PRIORITY	PARTS
1. VEHICLES (INCLUDING TANKS AND ENGINEER EQUIPMENT)	1	Carburetor/fuel pump/injector/distributor.
	2	Engine block and cooling system.
	3	Tires/tracks and suspensions.
	4	Mechanical or hydraulic systems (where applicable).
	5	Differentials.
	6	Frame.
2. GUNS	1	Breech, breech mechanism, and spares.
	2	Recoil mechanism.
	3	Tube.
	4	Sighting and fire control equipment (Priority 1 for Anti-Aircraft guns).
	5	Carriage and tires
3. SMALL ARMS	1	Breech mechanism.
	2	Barrel.
	3	Sighting equipment (including Infra-Red).
	4	Mounts.
4. OPTICAL EQUIPMENT	1	Optical parts.
	2	Mechanical components.
5. RADIO	1	Transmitter (oscillators and frequency generators).
	2	Receiver.
	3	Remote control units or switchboard (exchanges) and operating terminals.
	4	Power supply and/or generator set.
	5	Antennae.
	6	Tuning heads.
6. RADAR AND OTHER ELECTRONIC EQUIPMENT	1	Frequency determining components, records, operating instructions, which are subject to security regulations, and identification material (Identification Friend or Foe (IFF)).
	2	Antennae and associated components such as radiators, reflectors and optics.
	3	Transmission lines and wave guides.
	4	Transmitter high voltage components.
	5	Control consoles, displays, plotting boards.
	6	Cable systems.

EQUIPMENT	PRIORITY	PARTS
	7	Automatic devices.
	8	Other control panels and generators.
	9	Carriage and tires.
7. GUIDED MISSLE SYSTEMS	1	Battery control centers.
	2	Missile guidance equipment (including homing systems).
	3	Launchers including control circuits.
	4	Missiles.
	5	Measuring and test equipment.
	6	Generators and cable systems.
8. AIRCRAFT AND SURVEILLANCE DRONES	1	Identification (IFF) equipment, other classified electronic equipment, publications and documents pertaining thereto, and other materiel as defined by the national government concerned.
	2	Installed armament (Use sub-priorities for Group 2, Guns, or Group 3, Small Arms, as appropriate).
	3	Engine Assembly (Priorities for destruction of magnetos, carburetors, compressors, turbines and other engine sub-assemblies to be determined by national governments, depending on type of aircraft involved and time available for destruction).
	4	Airframe/control surfaces/ undercarriage (Priorities for destruction of propellers, hub-rotor blades, gear boxes, drive shafts, transmissions, and other sub-assemblies (not already destroyed in priority 3) to be determined by national governments, depending on type of aircraft involved and time available for destruction).
	5	Instruments, radios, and electronic equipment (not included in priority 1).
	6	Electrical, fuel, and hydraulic systems.
9. ROCKETS	1	Launcher.
	2	Rocket.
	3	Sights and fire control equipment.

APPENDIX M

STANAG 2151 (EDITION NO. 2)

ROUTE NETWORK—DEFINITIONS AND CHARACTERISTICS

Agreed English/French Texts

STANAG 2151
(Edition No. 2)

DETAILS OF AGREEMENT (DofA)

ROUTE NETWORK—DEFINITIONS AND CHARACTERISTICS

AGREEMENT

1. The NATO Armed Forces agree to adopt the following definitions in connection with the use of the road network and to evaluate the potential of this network in accordance with the characteristics indicated below.

DEFINITIONS

2. a. The Basic Military Route Network. This network includes all routes designated in peacetime by the host nations to meet the anticipated military movements and transport requirements, both allied and national.

NOTE: See definition of "route" in STANAG 2015.

b. The basic network should already, in peacetime, have sufficient capacity and be equipped with the necessary facilities.

NOTE (for information): There is a basic CENTRAL EUROPE military network formed from national networks.

3. a. A Military Road Manoeuvre Network. This network is the road system required by a commander for the conduct of a specific operation and for the required logistical support for that operation.

b. It is built up from the corresponding basic military road network the routes of which form the framework of the military manoeuvre nets, taking into consideration such additions or alternatives as may be required by circumstances and the needs of the Command. This network is defined and controlled (allotment of movement credits) by the military authorities, national or allied, according to the break-down of responsibilities in the theatre of operations (Communication Zone, Rear and Forward Combat Zone).

GENERAL BUILD-UP OF MILITARY ROUTE NETWORKS

4. a. Axial Routes ("pénétrantes" or "axiales"). This term denotes the routes running through the rear area and into the forward area. They are identified by odd numbers and shown on overlays by unbroken lines.

b. Lateral Routes ("latérales" or "rocades"). This term denotes the routes, the general direction of which is roughly parallel to the frontline, which feed into or cross axial routes. They are identified by even numbers and shown on overlays by broken lines.

STATUS OF ROUTES IN A MILITARY NETWORK

5. a. A Controlled Route ("itinéraire réglementé") denotes a route the use of which is subject to traffic or movement restrictions. ("Movement Credit" mentioned below is defined in STANAG 2154). Controlled routes can be divided into:

(1) A Supervised Route ("itinéraire surveillé") is a roadway over which control is exercised by a traffic control authority by means of traffic control posts, traffic patrols or both. A "Movement Credit" is required for its use by a column of 20 or more vehicles or by any vehicle of exceptional size or weight.

(2) A Despatch Route (UK: "regulated route"; FR: "itinéraire gardé") is a roadway over which full control, both as to priorities of use and the regulation of movement of traffic in time and space is exercised. A "Movement Credit" is required for its use by any independent vehicle or group of vehicles regardless of number or type.

(3) A Reserved Route ("itinéraire réservé ou spécialisé") is a route the use of which is:

(a) Allocated exclusively to a particular authority or formation ("itinéraire réservé") e.g. route reserved for the 10 Division, or

(b) Intended to meet a particular requirement ("itinéraire spécialisé") e.g. route reserved for evacuation.

b. An Open Route ("itinéraire libre") is a route for the use of which no "Movement Credit" is required.

c. A Blocked Route ("itinéraire bloqué") is a route on which the flow of traffic has become temporarily impassible owing to a material obstruction.

SPECIAL RESTRICTIONS AND/OR INDICATIONS

6. a. A One Way Route ("itineraire ou route a sens unique") is a road on which vehicles may move in one direction only at a particular time.

b. Prohibited Route ("itinéraire interdit") or Prohibited Section of Route is a route or section of route over which all traffic is prohibited.

c. A Signed Route ("itinéraire fléché") is a route along which a unit has placed, on its own initiative, for its exclusive use, and under the conditions prescribed by the Command or the manoeuvre regulations, directional signs which include the identification symbol of the unit concerned.

d. Route Where Guides Are Provided ("itinéraire jalonn"). This term denotes a route on which a unit has placed, under its own initiative and for its exclusive use and under the conditions prescribed by the Command or the manoeuvre regulations, guides responsible for showing the vehicles of the unit the direction they are to follow. These guides direct the personnel and vehicles of their own formation, but do not give any indication to personnel and vehicles of other units who must respect the common signing and regulations.

TRAFFIC FLOW AND ROAD CAPACITY

7. a. Traffic Flow ("débit d'un itinéraire"). The traffic flow at a given point is defined by the number of vehicles passing that point at a given time. Traffic flow is expressed as vehicles per hour (VPH).

b. Road Capacity.

(1) (Expressed in Vehicles)—The maximum traffic flow (VPH) in one direction over a particular road or route. It cannot be greater than the maximum traffic flow at the most restricted point on the road or route. (When the road is to be used in both directions this should be noted and the two capacities might be reduced accordingly).

(2) (Expressed in Tons). The maximum number of tons which can be moved in one direction over a particular road or route in one hour. It is the product of Road Capacity (Vehicles) and the average payload of the vehicles using the road or route. It is expressed in tons per hour. (When the road is to be used in both directions this should be noted and the two capacities might be reduced accordingly).

c. Complementary Remarks. Estimate of traffic flows and/or tonnage capacity should take into account the existing conditions. They may include:

(1) Road characteristics (terrain, type of roadway, number of lanes available, road maintenance, rated tonnage capacity of the weakest bridge).

(2) Military traffic regulations (density, speed limits, direction of traffic).

(3) Types of vehicles employed.

(4) Movement conditions (by day, by night, lighting and/or weather conditions).

CHARACTERISTICS

8. The characteristics of a route are in particular:

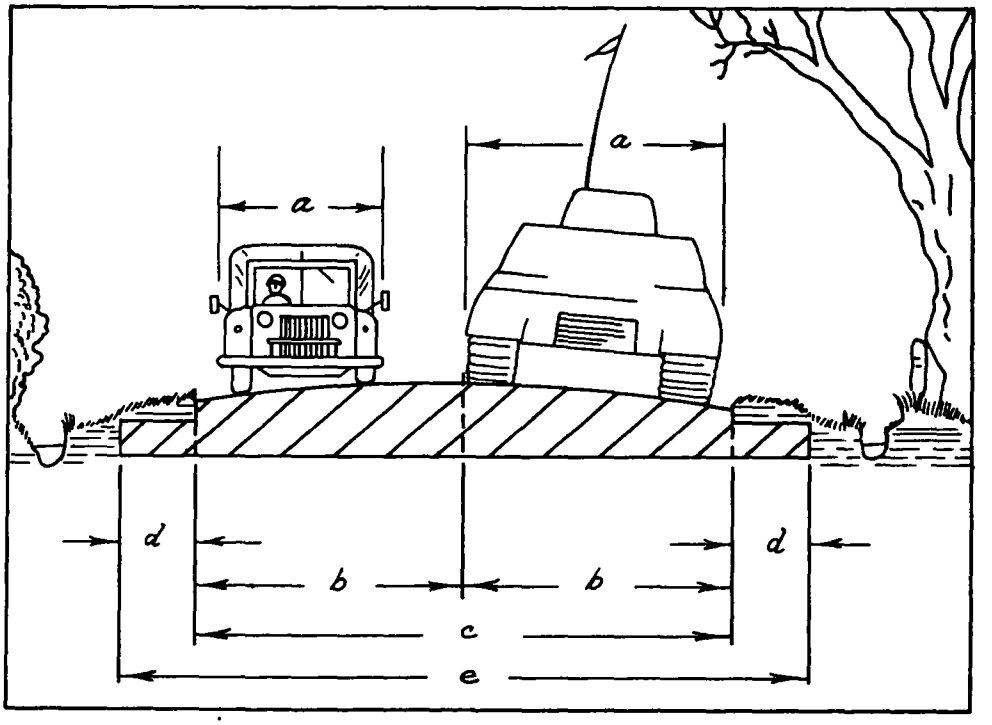
a. The width of the travelled way (UK: "carriage way").

b. The clearance of obstacles (e.g. tunnels, bridges, etc.).

c. The class of loads which can be accepted in accordance with STANAG 2021.

WIDTHS

9. a. The various widths of a road are illustrated in the drawing below:



LEGEND

a. Width of vehicle
b. " " lane
c. " " travelled way (UK: "carriage way")
d. " " hard shoulder
e. " " grading

b. The number of lanes is determined by the width of the travelled way; i.e. the subdivision of the travelled way to allow the movement of a single line of vehicles. Taking into account the width of a normal vehicle and the space required on either side of that vehicle, the width of the lane required for the movement of one column is normally estimated at 11½ feet (3.50m) and 13 feet (4m), for a tracked combat vehicle. A single lane road can only be used in one direction at any one time.

c. A route or road can be classified as single or double flow according to the number of lanes.

(1) A route or road is single flow ("simple courant") when it allows a column of vehicles to proceed and, in addition, isolated vehicles to overtake or to pass in the opposite direction, at predetermined points. It is desirable that the width of a single flow road be equal to at least 1½ lanes.

(2) A route or road is double flow ("double courant") when it allows two columns of vehicles to proceed simultaneously. It is essential that the width of a double flow road be equal at least to 2 lanes.

d. In the light of the above definition, the traffic possibilities can be shown in the following table:

FLOW POSSIBILITIES	ROAD WIDTHS FOR NORMAL VEHICLES ONLY	ROAD WIDTHS FOR TRACKED COMBAT VEHICLES
Isolated vehicles of appropriate width only and in one direction only.	At least 11½ ft., (3.50m)	At least 13 ft., (4m)
Generally one way only no overtaking or passing in opposite direction.	Between 11½ ft., and 18 ft. (3.50m and 5.50m)	Between 13 ft., and 19½ ft. (4m and 6m)
Single flow	Between 18 ft., and 23 ft. (5.50m and 7m)	Between 19½ ft., and 26ft. (6m and 8m)
Double flow	Over 23 ft. (7m)	Over 26 ft. (im)

e. The width of a route, for any given section, is that of the narrowest part of its travelled way (UK: "carriage way") for that given section. It is expressed in metres or feet.

OVERHEAD CLEARANCE

10. Overhead clearance ("hauteur limite") is the least distance between the surface of the travelled way and any obstruction vertically above it. It is an obstruction to the use of a route for all vehicles which exceed in height the overhead clearance of the route.

CLASS

11. a. Route. The class of a route is fixed in relation to the heaviest gross weight vehicle the route will accept. In such a case the choice of the route is limited (see STANAG 2021).

b. Network. The class of a network is fixed in relation to the minimum route classification in that network.

12. To facilitate movement, those routes included in a low class network but over which heavier equipment can be moved are re-grouped in broad categories:

Average traffic routes	:	Class 50
Heavy traffic routes	:	Class 80
Very heavy traffic routes	:	Class 120

13. Whenever possible, the basic military road network is composed of average routes (Class 50) and includes a certain number of heavy traffic routes (Class 80) and a few very heavy traffic routes (Class 120).

POTENTIAL

14. For planning purposes it would be useful that the potential of a route should be expressed on diagrams, tables and maps (by road sections) by:

a. Road capacity (in vehicles per hour—one way traffic or two way traffic—see para 7c(1)).

b. Number of lanes (normal vehicles, see para 9b.).

c. Load class (tracked vehicles, one way—see para 11a.).

(Example: 900/2/80/780 means a route with a one way traffic capacity of 900 VPH, 2 lanes, Class 80, or a two way traffic capacity of 780 VPH)

IMPLEMENTATION OF THE AGREEMENT

15. This STANAG will be considered to have been implemented when the necessary orders/instructions to use the information contained in this Agreement have been issued to the forces concerned.

APPENDIX N

STANAG 2154 (EDITION NO. 3)

DEFINITIONS AND REGULATIONS FOR MILITARY MOTOR MOVEMENTS BY ROAD

STANAG 2154
(Edition No. 3)

Agreed English/French Texts
DETAILS OF AGREEMENT (DofA)

DEFINITIONS AND REGULATIONS FOR MILITARY MOTOR MOVEMENTS BY ROAD

Annex A (DofA). Direction Arrow.

AGREEMENT

1. It is agreed that the NATO Armed Forces are to use the definitions and regulations applying to military motor movements by road, defined in the following paragraphs.

ORGANIZATION OF COLUMNS

2. A column is a group of vehicles moving under a single commander, over the same route, in the same direction.
3. A large column may be composed of a number of organized elements (subunits, march units, section of vehicles, etc.).
4. Each column and each organized element of the column must include:
   a. A commander whose place may vary.
   b. In the first vehicle: a subordinate commander known as the 'pace setter' (in French: guide).
   c. In the last vehicle: a subordinate commander known as the 'trail officer' (in French: serre-file).
5. The pace setter of the first element of a column leads it and regulates its speed. The trail officer of the last element deals with such problems as occur at the tail of the column.
6. In addition, each vehicle is to have a 'vehicle commander' (who may be the driver).

IDENTIFICATION OF COLUMNS

7. Each column is to be identified by flags and in some cases by a movement number.
8. Each column which has received a movement credit is to be identified by a number known as "the movement number" which is allocated by "the authority authorizing/arranging the movement" (the national authority on the Continent of Europe of the country where the movement or transport starts from, responsible for the planning and coordination after obtaining the agreement by the authorities concerned, e.g. territory, district or country to be crossed) (see paragraph 12 below). This number identifies the column during the whole of the movement.
9. The movement number is to be placed on both sides and, if possible,

on the front of at least the leading vehicle and the last vehicle of each organized element of the column. It is to be composed of:

a. Two figures indicating the day of the month on which the movement is due to commence.

b. Three or more letters indicating the authority organizing the movement, the first two letters being the national symbols indicated in STANAG 1059.

c. Two figures indicating the serial number of the movement.

d. One letter to identify the element of the column (This is optional).

(Example: identification 03–BEA–08–C will indicate that "C" element of Column No. 8 will be moved by the BE authority (A) on the 3rd day of the current month).

10. Additionally, each column is to be identified by flags or, for night movement, by lights, security permitting, as described below:

a. The leading vehicle of the column is to carry a blue flag (and a blue light at night.)

b. The last vehicle of the column is to carry a green flag (and a green light at night.)

c. The vehicle of the column commander is to display a white and black flag as indicated below, subject to the commander's discretion in certain circumstances.

d. A vehicle that cannot maintain its position in a column may indicate this condition by displaying a yellow flag.

e. Flags should be approximately 12″ (30 cm) × 18″ (45 cm) in size.

f. Flags are to be mounted on the left side of vehicles except where vehicles drive on the left, in which case the flags are to be mounted on the right side of the vehicles.

11. Headlights. In peacetime, all vehicles driving in a column are to use their dipped headlights, even in daylight.

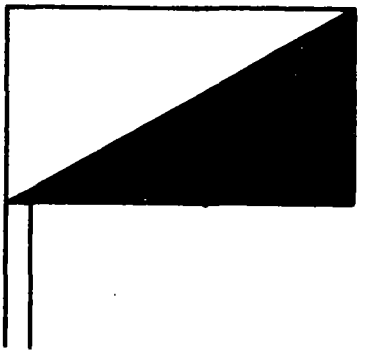
MOVEMENT CREDIT

12. a. A movement credit (in French "credit de mouvement") is the allocation granted, by the authority referred to in paragraph 8 above, to one or more vehicles in order to move over a controlled route in a fixed time according to movement instructions (see STANAG 2151, paragraph 5 of the Details of Agreement).

b. The movement credit includes the indication of times at which the first and the last vehicle of the column are scheduled to pass.

(1) The entry point, that is to say the point where the column enters the controlled route.

(2) The exit point, that is to say the point where the column leaves the controlled route.



(3) At critical points, and, if necessary at traffic control posts.

TIME AND DISTANCE FACTORS IN MOTOR COLUMNS

13. Vehicle Distance. 'Vehicle distance' (in French: distance) is the space between two consecutive vehicles of an organized element of a column.

14. Column Gap. 'Column gap' (in French: créneau) is the space between two consecutive elements proceeding in the same direction on the same route. It can be calculated in units of length or in units of time measured from the rear of one element to the front of the following element. (See AAP-6).

15. Traffic Density. 'Traffic density' (in French: densité du trafic) is the average number of vehicles that occupy one mile or one kilometre of road space, expressed in vehicles per mile (VPM) or per kilometre (VPK). (See AAP-6).

16. Length of a Column. 'Length of a column' (in French: longueur d'encombrement) is the length of roadway occupied by a column in movement including the gaps inside the column from the front of the leading vehicle to the rear of the last vehicle.

17. Pass Time 'Pass time' (in french: durée d'écoulement) is the time that elapses between the moment when the leading vehicle of a column passes a given point and the movement when the last vehicle passes the same point. (See AAP-6).

18. Road Clearance Time. 'Road clearance time' (in French: durée d'encombrement) is the total time a column requires to travel over and clear a section of road. (See AAP-6).

FORMATION AND DISPERSAL OF COLUMNS

19. Start Point. 'Start point' (in French: point initial) is a well defined point on a route at which a movement of vehicles begins to be under the control of the commander of this movement. It is at this point that the column is formed by the successive passing, at an appointed time, of each of the elements composing the column. In addition to the principal start point of a column there may be secondary start points for its different elements. (See AAP-6).

20. Release Point. 'Release point' (in French: point de dislocation) is a well defined point on a route at which the elements composing a column return under the authority of their respective commanders, each one of these elements continuing its movement towards its own appropriate destination. (See AAP-6). (In addition to the principal release point of a column, there may be several secondary release points for the various elements.)

SPEED AND FLOW OF COLUMNS

21. Average Speed. 'Average speed' (in French: vitesse de croisière) is the average distance travelled per hour calculated over the whole journey excluding specifically ordered halts. (See AAP-6). (It is expressed in miles or kilometres per hour.)

22. Speed. 'Speed' (in French: vitesse instantanée) indicates the actual rate of speed of a vehicle at a given moment, as shown on the speedometer (in kilometres/hour or miles/hour).

23. Pace. 'Pace' (in French: vitesse de marche) is the regulated speed of a column or element as set by the pace setter in order to maintain the average speed prescribed. (See AAP-6).

24. Rate of March. 'Rate of march' (in French: vitesse de progression) is the average number of miles or kilometres to be travelled in a given period of time including all ordered halts. It is expressed in miles or

kilometres in the hour. (See AAP–6). (The rate of march is a general planning factor used by staffs.)

ROUTE SIGNING AND ROAD GUIDES

25. STANAG 2151 gives the definition of a 'signed route' and of a 'route where guides are provided'.

26. Signing and guide teams are normally provided by the moving unit (see paragraph 29 below). Members of these teams must not, under any circumstances, wear the armbands and cuffs specified in STANAGs 2025 and 2159. They may wear coloured armbands.

27. Direction arrows used should preferably be black on white background and bear the identification symbol of the unit in question (distinctive sign or identification number). They may be of a similar type to those shown in Annex A (DofA). Before crossroads leading to several directions, a warning arrow can be used (type similar to that shown in Annex C to the Details of Agreement of STANAG 2012).

MILITARY ROUTE SIGNING

28. Unit route signs and unit guides are to be put out a short time in advance of the column and picked up as soon as possible after the tail of the column has passed.

29. Route signing and the placing of guides on controlled routes must be under the responsibility of the authority in charge of movements or traffic in the area concerned.

30. Outside these itineraries, the tasks above are to be the responsibility of the column commander.

SPECIAL REGULATIONS FOR THE EXECUTION OF MOVEMENTS

31. All personnel exercising a command in the column and all drivers must strictly obey the instructions of traffic control and regulating personnel.

32. When approaching a traffic control or a regulating post indicated by prescribed signs (STANAGs 2025 and 2012) the column commander or his representative must advance ahead of his column and report to the regulating post commander to:

a. Give the required information concerning his organized elements and their movements.

b. Receive information and possible instructions.

33. Through this post, he can also arrange for the transmission of his own instructions, or information, to the various elements of his column as they pass the post, where however they must not stop unless ordered to do so.

HALTS

34. Short Halts.

a. Short halts made by columns or elements of columns on the controlled routes normally are to last 10 minutes and take place in principle, every 2 hours, 10 minutes before the full hour, even or odd (this detail to be specified in orders). All columns following the same route are to stop at the same time.

b. However, the characteristics of the road may make it necessary for the halt to take place in one particular part of the route rather than simultaneously at a fixed time. In such cases, the necessary instructions are given in the orders relating to the movement.

35. Long Halts. No standard rules for the observance of long halts are laid down. They must always be specifically plotted on movement graphs in order to avoid possible conflict.

36. Particular attention is to be paid to the following aspects of traffic discipline:

a. When making a long halt, isolated vehicles or vehicles forming part of a column, should move off the roads as much as possible.

b. If this practice cannot be observed, the commander of a column which is halted on an itinerary must take all necessary measures to facilitate circulation for other road users and avoid accidents or traffic jams. The measures to be taken will vary according to the condition and width of the road:

(1) Warning, at a sufficient distance from the front and rear of the column (guards, warning flags, lights or flares, security permitting).

(2) If required, organize (direct) a system of one-way traffic alternately along the columns etc.

c. When a halted column resumes movement it has the right of way while moving back on to the road, unless otherwise prescribed.

OVERTAKING OF COLUMNS

37. By Isolated Vehicles.

a. An isolated vehicle is only authorized to overtake a moving column when:

(1) Its maximum authorized speed is appreciably higher than the speed at which the column is moving, thus enabling it to overtake each vehicle rapidly.

(2) There is sufficient distance between the vehicles of the column to allow the overtaking vehicle to regain its position in the proper lane after overtaking each vehicle.

(3) The trail officer of the column gives a clear signal that overtaking is possible.

b. In all other cases, an isolated vehicle is to overtake the column only when the latter is halted.

38. By Other Columns.

a. On a controlled route a column may only overtake another column on the orders of the movements authorities and as arranged by the traffic regulating personnel.

b. On an open route no column may overtake another moving column, except in special cases, e.g. on a one-way road wide enough. In these cases, the commander of the column desiring to pass is to contact the commander of the column to be passed prior to effecting passage.

c. Outside these special cases, the overtaking of a column by another column is only authorized if the former is halted and providing the moving column has the time to overtake the whole of the halted column before the latter is ready to move on. In this case, the commander of the column desiring to pass is to contact the commander of the column to be passed prior to effecting passage. The commander of the halted column after giving his agreement must facilitate the overtaking.

MOVING BY NIGHT (Reference: STANAG 2024)

39. By night, road movements are carried out according to traffic regulations as follows:

a. With normal lighting
OR
b. Reduced lighting
OR
c. Blackout lighting
OR
d. Without lights

From a certain line or on certain routes specified by orders.

OR)
e. Possibly with)
'balisage' (1))

40. When columns are moving under blackout conditions, traffic normally will be one-way.

IMPLEMENTATION OF THE AGREEMENT

41. This STANAG will be considered to have been implemented when the necessary orders/instructions to use the definitions and regulations contained in this Agreement have been issued to the forces concerned.

NOTE: (1) 'Balisage' is a method by which a route is outlined by a system of dim beacon lights enabling vehicles to be driven at near daytime speed, under blackout conditions.

ANNEX A (DofA) TO STANAG 2154
(Edition No. 3)

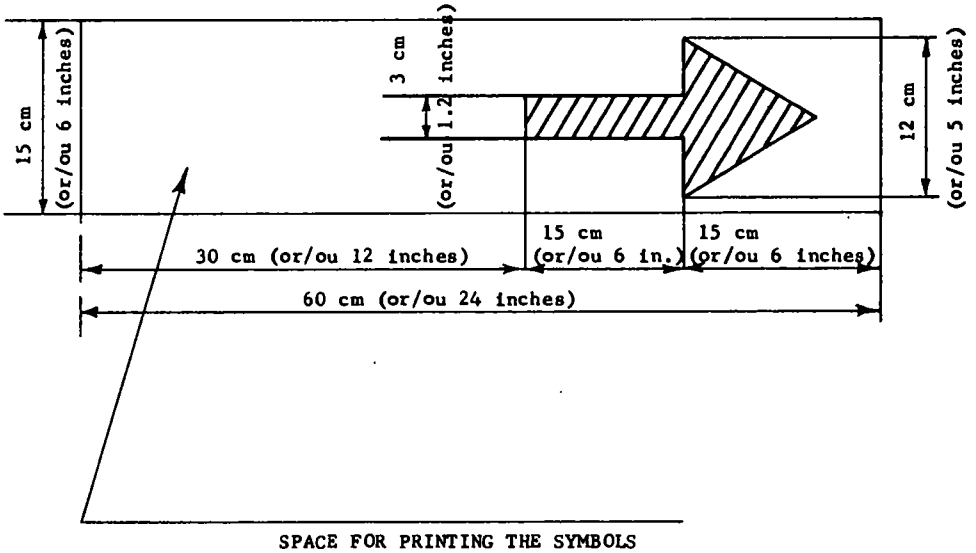
ANNEXE A (MdeA) AU STANAG 2154
(Edition No. 3)

DIRECTION ARROW

(made of psper, synthetic matter or wood.....)

FLECHE DE DIRECTION

(réalisée en papier, en matière synthétique ou en bois.....)



SPACE FOR PRINTING THE SYMBOLS

ESPACE DISPONIBLE POUR LES SYMBOLES

A(DofA/MdeA)-1

APPENDIX O

STANAG 2155

ROAD MOVEMENTS AND TRANSPORT DOCUMENTS

Agreed English/French Texts. STANAG 2155

DETAILS OF AGREEMENT (DofA)

ROAD MOVEMENTS AND TRANSPORT DOCUMENTS

Annexes: A(DofA). Road Movement Order.
B(DofA). Road Movement Bid and Movement Credit Granted
Granted

AGREEMENT

1. In order to facilitate the movements and transport arrangements in particular for crossing frontiers by road between the various NATO Nations, it is agreed that the NATO Armed Forces are to use the forms indicated in paragraph 2 below.

FORMS

2. The forms to be used are to be the proformae shown at the following Annexes:

Annex A(DofA)—Road Movement Order.
Annex B(DofA)—Road Movement Bid and Movement Credit Granted Forms.

PRINTING

3. The printing of these forms is to be made in at least one of the two official NATO languages (English and French) and in addition, in the language of the country of origin if other than English or French.

MISCELLANEOUS INFORMATION

4. When travelling from one NATO country to another, Annex A(DofA) is not a substitute for the NATO Travel Order (STANAG 2026) in so far as personnel carried in the vehicles are concerned.

5. The terminology used in this STANAG is defined in STANAGs 2151 and 2154.

IMPLEMENTATION OF THE AGREEMENT

6. This STANAG will be considered to have been implemented when the necessary orders/instructions bringing into use the documents mentioned in the Agreement have been issued to the forces concerned.

ANNEX A TO THE DETAILS OF AGREEMENT OF
STANAG 2155/ANNEXE A AUX MODALITES
DE L'ACCORD DU STANAG 2155

ROAD MOVEMENT ORDER/
ORDRE DE MOUVEMENT PAR ROUTE

Copy No./Exemplaire No. (3)

Movement number/numero de mouvement

No _____(2) _____

(1)

A Bearer of this document/ Porteur de ce document	Name/Nom	Rank/Grade	
B Unit/, Unite	Name/Nom	Location/Lieu	Country/Pays
C Mission (4)			
D Details of vehicles/ Détails sur les véhicules	Name/Nombre	Type/Genre	
E Movement instruction/ Conditions de mouvement	Outward journey/ Aller	Return journey/Retour (5)	
1 Place of departure/ Lieu de départ			
2 Date of departure/ Date de départ			
3 Route/ (9) Itinéraire			
4 Final destination/ Destination finale			
5 ETA Final destination/(6) ETA Destination finale			
6 Other movement data/ Divers			
7 Weapon(s) authorized/ Armement autorisé			

F
National and Allied military civilian authorities are requested to provide every assistance to the bearer of this Road Movement Order in the accomplishment of his mission/
Les autorités nationales et alliées, militaires et civiles sont priées de porter assistance au porteur du présent Ordre de Mouvement dans l'accomplissement de sa mission

At/A_____ on/le_____
Name/Nom_____
Signature_____(7)

At/A_____ on/le_____
Name/Nom_____
Signature_____(8)

A(DofA/MdeA)-1

ANNEX A TO THE DETAILS OF AGREEMENT
STANAG 2155
(Continued)

SUGGESTED END OF MISSION REPORT/
COMPTE RENDU DE FIN DE MISSION PROPOSE

1.	Personnel transported/ Personnel transporté		Expected number/ Effectif prévu	Actual number/ Effectif enlevé	
2.	Material or cargo transported/ Matériel transporté		Expected tonnage or volume/ Tonnage ou volume prévu	Actual tonnage or volume/ Tonnage ou volume enlevé	
3.	Number of vehicles/ Nombre de véhicules		Planned/ Prévu	Used/ Utilisé	
4.	Mileage/ Kilometrage par couru	Empty/Vide	Loaded/ Encharge	Total/Total	5. Petrol used/ Essence consommée
6.	Resupplies received from foreign authorities/ Ravitaillements effectués aupres d'autorités etrangeres	Petrol/Essence	Rations/Vivres	Spare parts/ Pièces de rechange	Other supplies/ Autres fournitures
7.	Duration of mission/ Durée de la mission	Departure from vehicle park on/ Depart du lieu de stationnement le _____at_____(hours)	Return to vehicle park on/ Retour au lieu de stationnement le _____at_____(hours) (heures)		
8.	Unavailable vehicles/ Véhicles indisponibles	For 24 hours/ Pour 24 heures	For 48 hours/ Pour 48 heures	For a period exceeding 48 hours/ Pour plus de 48 heures	
9.	Incidents/Incidents				
10.	Change(s) made to the initial order during the mission/ Modification(s) apportée(s) a l'ordre initial au cours de la mission				

_____ (Rank/Grade) _____ (Name/Nom) _____ (Signature of holder/ Signature du Titulaire)

At/A_____ on/le_____

A(DofA/NdeA)-2

GUIDE TO COMPLETION OF FORM/ GUIDE POUR LA REDACTION DU FORMULAIRE

NOTES

(1) Unit of service stamp of issuing authority/Timbre de l'unité' ou du service ayant delivré l'ordre.

(2) Serial number of Road Movement Order/Numéro d'Ordre do l'Ordre de mouvement.

(3) The Road Movement Order is prepared in triplicate; copies to be numbered 1, 2, and 3. Copies 1 and 2 are handed to the bearer of the Road Movement Order; Copy No. 3 remains at the issuing authority. On completion of the mission, Copy No. 2 is returned to the issuing authority as an end of mission report/L'Ordre de Mouvement est etabli en 3 exemplaires numérotés 1, 2 et 3. Les examplaires 1 et 2 sont remis au titulaire de l'Ordre de Mouvement; l'exemplaire 3 reste chez l'autorité, que a délivré l'Ordre de Mouvement. L'exemplaire No. 2 est renvoyé à l'autorite que a délivré l'Ordre de Mouvement, dûment complété au verso, pour rendre compte de la fin de mission.

(4) State the mission (the nature, the tonnage and/or volume of the load to be carried as far as security regulations allow)/Donner la mission (la nature, le tonnage et/ou le volume du chargement dans la mesure où les régles de sécurité le permettent).

(5) If the return instructions cannot be indicated by the issuing authority, this should be done by the appropriate authority at the place of destination/Si les instructions du retour ne peuvent pas être précisées par l'autorite que a délivré l'Ordre de Mouvement, ces instructions sont a fixer par l'autorité compétente du lieu de destination.

(6) ETA—Estimated Time of Arrival/Heure d'Arrivée prévue.

(7) Name, rank and signature of issuing authority for the outward journey/Nom, grade et signature de l'autorité ayant délivré l'Ordre de Mouvement pour le voyage aller.

(8) To be completed if the authority (7) was not able to do so (see (5))./A compléter si l'autorité (7) n'était pas compétente (voir (5)).

(9) Mention here the frontier meeting point/Mentionner le point de franchissement de la frontière.

ENCLOSURE 1 TO MAS(ARMY)(68)427

(ANNEX B TO DETAILS OF AGREEMENT OF STANAG 2155)

ROAD MOVEMENT BID AND MOVEMENT CREDIT GRANTED FORMS

FROM AUTHORITY AUTHORISING/ARRANGING THE MOVEMENT

TO: (Authority to whom the request is forwarded)

I. ROAD MOVEMENT BID

Reference No. S/1723 dated 10 February 1965

Serial	Formation Unit to be moved	Total Number of Prime Movers		Max. a. Weight or military load classification b. Height c. Width d. Type of heaviest vehicles	Earliest readiness for departure (date/time group)	Average speed		From: (start Point) To: (release point)	Route required with Entry Point Exit Point and Date/Time Group	Rest area required for long halt(s)	Density required (VPkm or VPM)(3)	Remarks or special requirements
		Wheeled	Tracked			All roads	Motor-ways					
A	B	C	D	E	F	G	H	J	K	L	M	N
1	702 Trans Coy	105	-	Ea. 7 tons = MLC-(1)	111930	30 km/h (4)	40 km/h (4)	HEVERLEE VOGELSANG	Route No.15 LOUVAIN 111945 TIENEN LIEGE BILOCHEN (CP) (2) AACHEN	-	30 VPkm (3)	-
2	7 Arty. Regt	40	25	Ea. 20 tons = MW-(1) Eb. 3.8 m. Ec. 2.8 m.	112000	20 MPH (4)	30 MPH (4)	ZONHOVEN BENSERG	Route No.15 HASSELT 112115 BIOLCHEN (CP)(2) VAALS/AACHEN KOELN	OUEREN	25 VPM (3)	Do not split up the unit

Legend: (1) Ea = Max Weight or Military Load Classification (State clearly whether it refers to weight or military load classification: MW or MLC)
Eb = Max Height
Ec = Max Width
Ed = Type of heaviest vehicles
(2) Frontier Crossing point (CP)
(3) VPkm = Vehicle per Kilometer
VPM = Vehicle per Mile
(4) km/h = Kilometers per hour
MPH = Miles per hour

B(DofA)-1

FROM: (Authority authorising/arranging the movement

FOR: 6 INF DIV

11. MOVEMENT CREDIT GRANTED

Your Reference No. : S/1723 dated 10 February 1965
Our Reference No. : 5/527 dated 10 February 1965

Serial	Movement No.	Average speed/ density ordered km/h(1), VPkm(2)		Route Ordered	Pass Time	Date/time group of head of column past point	Halts		Special Instructions
		All roads	Autoroutes				Short (or periodic)	Long Halt(s)	
Q	P	Q	R	S	T	U	V	X	Z
1	11-BEA-25	30 km/h/20 VPkm (19 MPH/32 VPM)	-	Route No. 15 LOUVAIN TIENEN LIEGE BILDCHEN (CP)(3) AACHEN	15 min	112030 2110 2300 120030 0010	10 minutes before even hours		
2	11-BEA-26	-	30 km/h/20 VPkm (19 MPH/32 VPM)	Route No. 15 HASSELT ROCOUR BILDCHEN (CP)(3) AACHEN AACHEN KOELN	10 min	112100 2200 2330 120010 120120 0340	-	AACHEN 1 hour	Leave the motorway and schedule a long halt 1 km South of motorway entry.

Legend: (1) km/h = Kilometer per hour
MPH = Miles per hour
(2) VPkm = Vehicles per kilometer
VPM = Vehicles per mile
(3) CP - Frontier crossing point

B(DofA)-2

APPENDIX P

STANAG 2156

TRANSPORT REQUEST AND REPLY TO TRANSPORT REQUEST

Agreed English/French Texts STANAG 2156

DETAILS OF AGREEMENT

TRANSPORT REQUEST AND REPLY TO TRANSPORT REQUEST

Enclosures: I. Annex 'A'—TRANSPORT REQUEST and Appendices 1 and 2.
II. Annex 'B'—REPLY TO TRANSPORT REQUEST and Appendices 1 and 2.

INTRODUCTION

1. When a unit or formation has to effect a movement for which:—
   a. it does not possess appropriate means of transport,
   b. it has inadequate means of transport,
   c. it cannot use its own means of transport,

such a unit or formation must prepare a TRANSPORT REQUEST and submit it to the headquarters concerned (Movements and Transport Staff) in accordance with national instructions and international agreements in force.

2. The TRANSPORT REQUEST will be prepared either:—
   a. by the unit or formation requiring transport,
   b. or, in urgent cases, by the military commander ordering the movement or transport.

3. The headquarters concerned (Movements and Transport Staff) which receives the TRANSPORT REQUEST should find in it ALL the information necessary to enable it to determine quite independently:—
   a. the most suitable means of transport, in relation to the requirements and the actual transport available;
   b. the action necessary to organize the transport or the movement.

4. The headquarters concerned (Movements and Transport Staff), when it has considered the Transport Request, will send the unit or formation a reply in the form of a REPLY TO TRANSPORT REQUEST. The Reply to a Transport Request:—
   a. is used for the purpose of giving the requesting unit or formation a reply as soon as possible so that it may make the preparations for the movement or transport in question;
   b. may be circulated as an integral part of (or as an annex or supplement to) the Movement Order issued by the authorities responsible;
   c. does not preclude the submitting of a "Movement Credit" request on the routes where it is required (in accordance with STANAG 2151).

AGREEMENT

5. In order to standardize the information to be incorporated in the TRANSPORT REQUEST and REPLY TO TRANSPORT REQUEST, the NATO Armed Forces agree to comply with instructions in paragraphs 7 and 8 below when preparing such forms. It is further agreed:—

a. that these documents must be capable of transmission, in code form, by message or telephone;

b. that it is not necessary to standardize the layout and format of the forms used for TRANSPORT REQUEST and REPLY TO TRANSPORT REQUEST.

6. If the TRANSPORT REQUEST is for a troop or supply movement by Air and is approved by the proper authority, the Movements Staff concerned will transcribe the requirement onto a form NATO Request for Air Transport (NARAT) in accordance with STANAG 3093.

THE TRANSPORT REQUEST

7. The TRANSPORT REQUEST will give the information called for in the example shown at ANNEX 'A'.

a. The FIRST Part *must be completed in full.*

b. The SECOND, THIRD, FOURTH and FIFTH Parts will be filled in as necessary. Unused spaces will not be taken up subsequently. It is therefore UNnecessary to give nil returns.

c. *Examples:—*

(1) for the movement of an Infantry Battalion see Appendix 1 to ANNEX 'A';

(2) for the transport of a general cargo see Appendix 2 to ANNEX 'A'.

THE REPLY TO TRANSPORT REQUEST

8. The REPLY TO TRANSPORT REQUEST will provide the information listed in the example at ANNEX 'B'.

a. The FIRST Part must be completed in full.

b. The other parts will be filled in as necessary. Unused spaces will not be taken up subsequently. It is therefore UNnecessary to give nil returns.

c. Examples are given at Appendices 1 and 2 to ANNEX 'B'.

ANNEX 'A' to STANAG 2156

TRANSPORT REQUEST

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
		FIRST PART	
ONE		Very brief description of operation	
TWO		Priority category	If known
THREE		Headquarters concerned (Movements and Transport Staff), unit or service submitting Transport Request	Add: a. rank, name and appointment of officer signing transport request b. address and Tel. No.
FOUR		Security Classification, Reference No. and "Date-time" group given to Transport Request by requesting authority mentioned in FIRST PART THREE	
FIVE		Departure point of transport	Extact position and coordinates
SIX		"Date-time" group of possible start of embarkation or loading operation.	Indicate Time Zone
SEVEN		Destination of transport	Exact position and coordinates
EIGHT		"Date-time" group by which it is desirable that the transport should reach its destination	Indicate Time Zone
NINE		Means of transport desired	Use the following code:— RED : for road transport BLACK : for rail transport BLUE : for inland waterways GREEN : for sea transport

CODE (a)	CODE (b)	MEANING (c)	REMARKS (d)
			YELLOW : for air transport
TEN		Has the agency requesting transport a metal field loading ramp?	Answer YES or NO
ELEVEN		Any further information considered to be of use.	
		SECOND PART	
ONE	ALPHA	Male personnel to be transported :— A/B/C	A = number of officers B = number of Sergeants (or equivalent ranks) and above C = number of Corporals (or equivalent ranks) and below
	BRAVO	Female personnel to be transported :— A/B/C	A, B and C as for SECOND PART ONE ALPHA
TWO		Personal baggage, dress, personal weapons, etc.	Brief description
THREE		Officer commanding personnel during movement	Give : rank, name
FOUR	ALPHA	Animals : A/B	A = kind B = number
	BRAVO	etc.	
		THIRD PART	
ONE		TANKS AND TRACKED VEHICLES	
	ALPHA	Re first category of vehicles A/B/C/D	A = official description B = number to be moved C = weight in tons D = military class
	BRAVO	E = a × b × c centimetres or inches	a = overall length b = overall width c = overall height (cm for centimetres

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
			in for inches) Where a detail is not known the word 'BLANK' will be inserted; in this way, it will always be possible to identify the data given
		Re second category of vehicles	
	CHARLIE	A/B/C/D	((As above
	DELTA	E Re third category of vehicles	(
	ECHO	A/B/C/D	((As above
	FOXTROT	E etc.	(
TWO		ARTILLERY Re first category	
	ALPHA	A/B/C	A = official description B = number to be moved C = weight in tons
	BRAVO	D = a × b × c centimetres or inches (cm or in)	a = overall length b = overall width c = overall height Insert the word 'BLANK' where any detail is not known
		Re second category	
	CHARLIE	A/B/C	((As above
	DELTA	D Re third category	(
	ECHO	A/B/C	((As above
	FOXTROT	D	(
THREE		WHEELED MOTOR VEHICLES Re first category of vehicles	
	ALPHA	A/B/C/D	As for tanks (THIRD PART ONE above)
	BRAVO	E	
		Re second category of vehicles	
	CHARLIE	A/B/C/D	As above

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
	DELTA	E etc.	
	ZULU	Number of motor-cycles	
FOUR		TRAILERS Re first category of trailers	
	ALPHA	A/B/C/D	As for tanks (THIRD PART ONE above)
	BRAVO	E	
		Re second category of trailers	
	CHARLIE	A/B/C/D	As above
	DELTA	E etc.	
	YANKEE	Type of tractor necessary for trailers with no tractor vehicle	Allow the authority to which the request is submitted to settle this problem, if a road movement is prescribed.
FIVE		TROOPS, MISCELLANEOUS EQUIPMENT, SUPPLIES, ETC. (WHICH CANNOT BE LOADED IN THE UNIT'S OWN TRANSPORT)	
	ALPHA	Personnel : A/B/C	A = number of officers B = number of Sergeants (or equivalent ranks) and above C = number of Corporals (or equivalent ranks) and below
	BRAVO	A/B for first category of cargo	A = brief description of cargo B = weight (in tons)
	CHARLIE	A/B for second category of cargo etc.	As above
		FOURTH PART	
ONE		GENERAL CARGO—FIRST TYPE	
	ALPHA	Brief description	

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
	BRAVO	Weight	In tons
	CHARLIE	Average dimensions of items:— a × b × c centimetres or inches	1) State cm for centimetres, in for inches. 2) a = length b = width c = height
	DELTA	Loading Capability of sender: A	A = tons per hour
	ECHO	Unloading capability of receiving unit: A	A = tons per hour
	FOXTROT	Special precautions desired	
	GOLF	Brief description of heavy or awkward lifts.	
TWO		GENERAL CARGO—SECOND TYPE	
	ALPHA	(	
	BRAVO	(	
	CHARLIE	(As for FOURTH	
	DELTA	(PART ONE	
	ECHO	(	
	FOXTROT	(	
	GOLF	(	
		FIFTH PART	
	ALPHA	Requests for procuring of special means of transport	
	BRAVO	Items or convoys requiring an escort which the unit itself is unable to provide	
	CHARLIE	Any further information considered to be of use	

NOTE: The FIRST Part of this format must be completed in full. The SECOND, THIRD, FOURTH and FIFTH Parts to be filled in as necessary.

APPENDIX 1 to ANNEX 'A'
to STANAG 2156

MESSAGE				SECRET
FROM	:	COMMANDER 12 INF BN		
FOR	:	ACTION	: COMMANDER MCG/ INTER	URGENT OPS
		INFO	: COMMANDER F INTER	ROUTINE
SUBJECT			: TRANSPORT REQUEST	
FIRST				
	ONE		: MOV OF 12 INF BN OVER DISTANCE OF 250 KM	
	THREE		: COMMANDER 12 INF BN MAJOR JEAN S3 KLEMSKERKE EDEN CINEMA TEL. OSTEND 46521	
	FOUR		: SECRET 982 OF 120730 Z	
	FIVE		: KLEMSKERKE ES 0177	
	SIX		: 122200 Z	
	SEVEN		: VERVIERS GS 0408	
	EIGHT		: 140600 Z	
	NINE		: BLACK	
	TEN		: NO	
SECOND				
	ONE		: A 40 + B116 + C 638	
	TWO		: KITBAG / BATTLE DRESS	
	THREE		: CAPT. LOUIS	
THIRD				
	ONE	ALPHA	: CARRIER 81 MM MORTAR MT/8/8/8	
		BRAVO	: 638 × 223 × 227 CM	
		CHARLIE	: CARRIER HT M9/10/8/9/	
		DELTA	: 618 × 221 × 228 CM	
	THREE	ALPHA	: JEEP/50/2/2/	
		BRAVO	: 69 × 55 × 70 IN	
		CHARLIE	: AMBULANCE/2/5/5	
		DELTA	: 590 × 213 × 264 CM	
		ECHO	: VAN BAN/10/3/4	
		FOXTROT	: BLANK	
		GOLF	: LORRY 3T/60/8/10/	
		HOTEL	: 567 × 230 × 310 CM	
		INDIA	: TRUCK MED WRECKER/3/18/15	
		JULIET	: 310 × 9.7 × 103 IN	
		ZULU	: 22	
	FOUR	ALPHA	: TRAILER 250 KG 2-WHEEL/17/1/1/	
		BRAVO	: 109 × 56 – 40 IN	
		CHARLIE	: TRAILER 1 T2-WHEEL/30/1/1/	
		DELTA	: 380 × 220 × 217 CM	
	FIVE	BRAVO	: RESERVE FOOD SUPPLIES/15 T	
		CHARLIE	: INF AMMO/5 T	

APPENDIX 2 to ANNEX 'A'
to STANAG 2156

MESSAGE			SECRET
FROM	:	CMP OSTEND—NIEUWPOORT	
FOR	: ACTION	: COMMANDER MCG/ INTER	URGENT OPS
	INFO	: COMMANDER 10 ROUTINE AMMO DEPOT	
SUBJECT		: TRANSPORT REQUEST	
FIRST			
ONE		: TRANSPORT OF AMMUNITION	
THREE		: CMP OSTEND LT COL BAUDRIER S3 HOTEL COSMOPOLITE OSTEND TEL. 65232	
FOUR		: SECRET 2155 OF 120830 Z	
FIVE		: PORT NIEUWPOORT—BASSIN DES PECHEURS DS 8276	
SIX		: 131000 Z	
SEVEN		: 10 AMMO DEPOT HOUTHULST DS 9746	
NINE		: RED	
TEN		: YES	
FOURTH			
ALPHA		: INF AND ARTY AMMO	
BRAVO		: 400 T	
CHARLIE		: 80 × 40 × 30 CM	
DELTA		: 50 T/HR	
ECHO		: 60 T/HR	

ANNEX 'B' to STANAG 2156

REPLY TO TRANSPORT REQUEST

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
		FIRST PART	
ONE		Security Classification, Reference No. and "Date-time" group of transport request to which this reply relates.	
TWO		Security Classification, Reference No. and "Date-time" group allocated to this reply by sender.	
THREE		Means of transport allocated	Use the following code: RED : road BLACK : rail BLUE : inland waterway GREEN : sea YELLOW : air
FOUR		Complete statement of means of transport allocated.	
FIVE		Rank, name and appointment of officer by whom this reply is signed.	
SIX		Any additional information considered useful.	
		SECOND PART	
ONE		Exact location of transport allocated.	Identification and coordinates.
TWO		"Date-time" group when embarkation or loading operations can begin.	Indicate Time Zone. If necessary, break down into ALPHA, BRAVO, CHARLIE etc., if transport availability is spaced out over a period of time.
THREE		Expected approximate "Date-time" group of departure loaded movement or transport.	Particularly important in the case of rail movements. Indicate Time Zone.
FOUR		Route	Only for road or

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
			inland waterway movement or transport.
FIVE		Place of disembarkation or unloading.	Identification and coordinates.
SIX		Any information considered useful.	
		THIRD PART	
ONE		Any information regarding waiting or transit area; points of first destination, etc.	If necessary, break down into ALPHA, BRAVO, etc.
TWO		Special instructions: standards of marching, lighting, blackout line etc.	As above.
THREE		Comments regarding control and regulating of movements.	As above.

NOTE: The FIRST Part of this format must be completed in full. The other Parts will be filled in as necessary.

APPENDIX 1 to ANNEX 'B'
to STANAG 2156

REPLY TO TRANSPORT REQUEST

MESSAGE			SECRET
FROM	:	COMMANDER MCG/INTER	
FOR	:	ACTION	: COMMANDER 12 INF BN
		INFO	: COMMANDER F INTER
SUBJECT			: REPLY TO TRANSPORT REQUEST
FIRST			
ONE			: YOUR SECRET 982 OF 120730 Z
TWO			: SECRET 551 OF 12 1100 Z
THREE			: RED EXCEPT FOR YOUR THIRD PART ONE AND THIRD PART FIVE WHICH WILL USE BLACK
FOUR			: 12 15METRE FLAT WAGONS AND 5 12T CLOSED WAGONS
FIVE			: MAJOR JACQUES S3
SECOND			
ONE			: OSTEND MARITIME STATION DS 9775
TWO			: 130200 Z
THREE			: 130600 Z
FIVE			: VERVIERS EAST STATION GS 0409
THIRD			
TWO			: RAMPS AVAILABLE AT OSTEND AND VERVIERS
THREE ALPHA			: FOR YOUR RED MOVEMENT, YOU SHOULD APPLY FOR MOVEMENT CREDIT THROUGH NORMAL CHANNELS
	BRAVO		: BLACK MOVEMENT CAN BE CONTACTED VIA RTO GAND ST PIERRE AND LOUVAIN

APPENDIX 2 to ANNEX 'B'
to STANAG 2156

REPLY TO TRANSPORT REQUEST

MESSAGE			SECRET
FROM	: COMMANDER MCG/INTER		
FOR	: ACTION	: CMP OSTEND-NIEUWPOORT 10	
	INFO	: COMMANDER AMMO DEPOT	URGENT OPS URGENT
SUBJECT		: REPLY TO TRANSPORT REQUEST	
FIRST			
	ONE	: YOUR SECRET 2155 OF 120830 Z	
	TWO	: SECRET 558 OF 12 1345 Z	
	THREE	: RED	
	FOUR	: 20 5T CIVILIAN LORRIES FOR 4 UNINTERRUPTED TRIPS	
	FIVE	: MAJOR JACQUES S3	
	SIX	: THESE CIVILIAN VEHICLES WILL BE PROVIDED BY OTR FURNES TEL. 216.29 —GARAGE MODERNE—55, RUE DE LA GARE	
SECOND			
	ONE	: NIEUPWOORT—MARCHE AUX GRAINS —DS 8276	
	TWO	: 130900 Z	
	THREE	: 13 1300 Z/13 1800 Z/13 2300 Z/14 0400 Z	
	FOUR	: PERVYSE/DIKSMUIDE/KLERKEN/ HOUTHULST	
	FIVE	: 10 AMMO DEPOT HOUTHULST DS 9746	
THIRD			
	ONE ALPHA	: SEND REPRESENTATIVE TO MARCHE AUX GRAINS NIEUWPOORT TO DIRECT VEHICLES TO LOADING QUAY	
	BRAVO	: WHEN MISSION COMPLETED, PLACE TRANSPORT AT DISPOSAL OF OTR FURNES	
	THREE	: ROUTE UNSPECIFIED	

APPENDIX Q

STANAG 2158 (EDITION NO. 2)

IDENTIFICATION OF MILITARY TRAINS

STANAG 2158
(Edition No. 2)

Agreed English/French Texts.

DETAILS OF AGREEMENT (DofA)

IDENTIFICATION OF MILITARY TRAINS

AGREEMENT

1. The NATO Armed Forces have agreed to adopt the international identification code defined below for the identification of military trains.

BACKGROUND

2. a. A different procedure is used by each NATO Nation for the identification of military trains moving within its territory.

b. A national technical code number is used by each civilian railway organization for each individual train. This number, although primarily designed to keep a record of trains, may, however, give some indication as to the train's country of origin. This number is changed when frontiers are crossed and for various reasons it is impossible to contemplate retaining it beyond the frontier of the country of origin.

c. Some countries have thought it necessary, for the benefit of their military authorities, to add a number to the technical code number, indicating thereby the nature of the contents of the train (troops or supplies). This additional number has so far been specially reserved for the use of the military authorities within the nation in question.

3. It was therefore essential that a standardized procedure be defined and that a code number be devised for the use of military authorities, (allied or national), which would remain unchanged throughout the journey across various frontiers and would cause no inconvenience to railway organizations (which would continue to use their technical numbers).

REQUIREMENTS

4. a. The code number, known, as the 'International Identification Code for Military Trains' must show in particular:

(1) Movement execution priority, for which it has been agreed to adopt three classes, priority number one being the highest and being assigned in exceptional cases only.

(2) Country of origin.

(3) Date of departure.

(4) National identification code number; in order to ensure identification of a given train among other trains to which the above informa-

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NOTE (1) This number is assigned by the military authorities of that country of origin and will provide information as to the nature of the load carried.

tion might also apply (as in the case of several trains departing on the same day), a national identification code number(1) should be included at a given position, in the international code.

(5) Country of destination.

b. Because of the complexity of the problem, this procedure will be used only for the identification of complete military trains as opposed to individual goods wagons (US freight cars) or groups of such wagons. If a train is broken up on the final stage of its journey, only its biggest section may, if appropriate, retain the original number.

c. In the planning stage of initial movements the priority and the date of departure will be temporarily replaced in the International Identification Code Number by 0 (zero) and 00 (two zeros) respectively. If the priority is unknown, the index 0 will be used and the movement will take place at the lowest priority. The true date of departure will be given by the movements control agency as soon as it is known.

DEFINITION OF THE INTERNATIONAL IDENTIFICATION CODE FOR USE ON MILITARY TRAINS

5. The code will comprise a series of figures, letters or symbols, arranged as follows:

a. One figure to indicate the movement execution priority.

b. Two letters to indicate the country of origin (letters indicating the nationality as in STANAG 1059).

c. Two figures to indicate the day of departure (in the current month).

d. The national identification code number(1) as assigned by the country of origin.

e. Two letters to indicate the country of destination.

6. For example:

2-FR-07-436239-NL

identifies a military train as follows:

a. Movement execution priority is 2.

b. The country of origin is FRANCE.

c. The date of departure is 7th of the current month.

d. The national identification code number(1) assigned by FRANCE is 436239.

e. The train contains items for shipment to the NETHERLANDS.

IMPLEMENTATION OF THE AGREEMENT

7. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the procedures detailed in the Agreement into effect have been issued to the forces concerned.

NOTE (1) This number is assigned by the military authorities of that country of origin and will provide information as to the nature of the load carried.

APPENDIX R

STANAG 2159 (EDITION NO. 3)

IDENTIFICATION OF MOVEMENT CONTROL AND TRAFFIC CONTROL PERSONNEL AND AGENCIES

STANAG 2159
Agreed English/French Texts (Edition No. 3)

DETAILS OF AGREEMENT (DofA)

IDENTIFICATION OF MOVEMENT CONTROL AND TRAFFIC CONTROL, PERSONNEL AND AGENCIES

AGREEMENT

1. The NATO Armed Forces agree to use the methods set out below for identifying:
   a. Movement Control and Traffic Control Personnel.
   b. Movement Control and Traffic Control Agencies.

DEFINITIONS

2. a. Movement Control. The planning, routing, scheduling and control of personnel and supply movements over lines of communication; also an organization responsible for these functions. This definition is taken from the NATO Glossary of Military Terms in English and French (AAP-6) and is repeated for convenience.

b. Traffic Control. For the purpose of this Agreement, this term is defined as: the physical direction of traffic to meet military requirements.

STATEMENT OF DETAILS

3. Identification of Movement Control and Traffic Control Personnel

a. Movement Control Personnel. Armbands will be used to identify all movement control personnel who come into personal contact with forces (individual members and/or units of the Armed Forces) being moved by water, rail, motor or air transport modes.

(1) The armband will be red, approximately 16! inches (42 cm) long and 3! inches (9 cm) wide, with an 8-spoked yellow wheel, 3 inches (7! cm) in diameter, centred on the band.

(2) The armband will be worn by movement control personnel while on duty, in accordance with the uniform regulations of the country concerned, and in a manner so that the wheel is clearly seen. Staff officers may wear normal staff armbands if that is the usual practice of the countries concerned.

b. Traffic Control Personnel. Personnel posted along routes and engaged in traffic control will wear white cuffs. A general description (including recommended dimensions) of these cuffs is contained in STANAG 2025, paragraphs 23 and 24.

4. Identification of Movement Control and Traffic Control Agencies

a. Standard guide signs shall be used to identify and provide road directions to movement control and traffic control agencies.

(1) For those agencies which are part of a superior headquarters, guide signs and identification shall be in accordance with STANAG 2035.

(2) For those agencies which are not an integral part of a superior headquarters, guide signs and identification shall be in accordance with paragraphs b. and c. below and the example shown in Annex I, pages 1-6, STANAG 2019.

b. The guide signs referred to in paragraph 4.a.(2) above will conform to the provisions of paragraphs 5 and 13 of STANAG 2012.

c. The guide signs will display the following:

(1) The symbols laid down in STANAG 2019 or, if no appropriate symbol can be found in STANAG 2019, an eight-spoked wheel.

(2) The national distinguishing letters in accordance with STANAG 1059.

(3) The direction and/or distance to the agency concerned, if necessary.

IMPLEMENTATION OF THE AGREEMENT

5. This STANAG will be considered to have been implemented when the necessary orders/instructions to adopt the methods of identification described in the Agreement have been issued to the forces concerned.

APPENDIX S

STANAG 2164

ADVICE OF MOVEMENT AND SOLOG AGREEMENT 50R

Agreed English/French Texts STANAG 2164

DETAILS OF AGREEMENT (DofA)

ADVICE OF MOVEMENT

Enclosures: Annex 'A' (DofA) Advice of Movement of Personnel (AMOVPER).
Annex 'B' (DofA) Advice of Movement of Freight (AMOVMAT).

AGREEMENT

1. The NATO Armed Forces have agreed to adopt the procedure laid down in this STANAG for advising transit and destination authorities of the movement of personnel and freight. This Agreement applies to NATO Armed Forces operating in a ground role and deals only with internal movement (or transport). It does not therefore deal with movements which involve trans-world movement by sea or by air.

2. Internal movement is defined as "movement by an agency within a country or within a defined land mass which may contain several countries, e.g. N. W. EUROPE". Among these types of movements (or transport) taken as a whole, some require special consideration, due, on the one hand, to the nature of the load and on the means of transport to be used, and on the other hand, to the time in which they have to be carried out. For such types of movement (or transport) it would appear desirable that the receiving authorities (and if need be, the transit authorities) be notified in advance by the despatching authorities in order that:

a. The transport may be monitored and regulated as necessary.

b. Receipt arrangements and, where necessary, off-loading arrangements may be made.

c. Appropriate action may be taken in the event of unforeseen incidents or changes of plan.

d. Non-arrivals or delays may be investigated.

3. For these purposes, the despatching authorities will prepare forms entitled "Advice of Movement of Personnel" (AMOVPER) and "Advice of Movement of Freight" (AMOVMAT). These are shown in Annexes "A" and "B" (DofA).

AIM

4. The aim of this Agreement is to:

a. List the "Movements (or Transport) Categories" for which, in view of either the nature of the load or the means of transport employed, "Advice of Movement" is considered necessary.

b. Define the "Types of Movement (or Transport)" conditions to be

complied with in order that, as a result of the time-table laid down, "Advice of Movement" shall be considered necessary.

c. Standardize the information and format of the "Advice of Movement of Personnel" and of the "Advice of Movement of Freight".

USE OF THE FORMS

5. The NATO Armed Forces agree to use the Advice of Movement of Personnel (AMOVPER) and Advice of Movement of Freight (AMOVMAT) for the following "categories" or "types" of movements (or transport):

a. Categories of Movements (or Transport).

(1) Vehicles, guns and self-propelled equipment.

(2) Empty or filled, military controlled and "pool" warflats, warflat trains, warwells, rectanks, internal user wagons, coaches, ward cars or ramp wagons.

(3) Military Traffic on warflats let to civilian railway organizations.

(4) Military locomotives, workshop vans, weed-killing trains or cistern wagons (tankers).

(5) Ammunition, projectiles or missiles.

(6) Exceptional loads or of a dangerous nature.

(7) All special trains transporting military personnel.

b. Types of Movement (or Transport).

(1) Mobilisation movements.

(2) Traffic required to be at a destination by a date or at a time sufficiently short to justify the adoption of the "Urgent" procedure.

(3) Any traffic specially advised as "Urgent" by a headquarters authorised to do so.

c. Information to be Given on the Forms.

(1) AMOVPER and AMOVMAT forms will contain necessary information as indicated in Annexes "A" and "B" (DofA).

(2) The information will be identified by the paragraph code given in Annexes "A" and "B" (DofA).

IMPLEMENTATION OF THE AGREEMENT

6. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the procedure detailed in this Agreement into effect have been issued to the forces concerned.

ANNEX "A" to DETAILS OF AGREEMENT
of STANAG 2164

ADVICE OF MOVEMENT OF PERSONNEL (AMOVPER)

CODE	MEANING	REMARKS
(a)	(b)	(c)
ONE	Authority and/or Movement No.	If movement not connected to a pre-planned move a brief summary of move will be given.
TWO	Number of personnel by ranks	
ALPHA	A + B + C	1. ALPHA—Male personnel
BRAVO	A + B + C	2. BRAVO—Female personnel 3. A. Number of Officers B. Number of Sergeants (or equivalent ranks) and above. C. Corporals (or equivalent ranks) and below.
THREE	Details of accompanied baggage or equipment i.e. location, weight and cube.	
FOUR	Identification of means of transport.	Use the following code: Red for road transport. Black for rail transport. Blue for inland water transport. Green for sea transport. Yellow for air transport. Followed by: 1. Military train number and number of wagons. 2. Number of road convoy or number of vehicle. 3. Identifying number and

CODE	MEANING	REMARKS
(a)	(b)	(c)
		type of aircraft. 4. Name and/or number of barge as appropriate.
FIVE	Place of departure and scheduled time-date group.	Time zone to be shown.
SIX	Destination and scheduled time-date group of arrival.	
SEVEN	Route, transshipment or supply points and scheduled time-date group of arrival at these points.	
EIGHT	NOT APPLICABLE	
NINE	Additional information instructions if necessary	e.g. place and date-time group of arrival at frontier.

ANNEX "B" to DETAILS OF AGREEMENT
of STANAG 2164

ADVICE OF MOVEMENT OF FREIGHT (AMOVMAT)

CODE	MEANING	REMARKS
(a)	(b)	(c)
ONE	Authority and/or consignment number.	If movement not connected to a pre-planned move a brief summary of move will be given.
TWO	Brief description, nature and tonnage of freight/equipment.	
THREE	NOT APPLICABLE	
FOUR	Identification of means of transport.	Use the following code: Red for road transport. Black for rail transport. Blue for inland water transport. Green for sea transport. Yellow for air transport. Followed by: 1. Military train number and number of wagons. 2. Number of road convoy or number of vehicle. 3. Identifying number and type of aircraft. 4. Name and/or number of barge as appropriate.
FIVE	Place of departure and scheduled time-date group.	Time zone to be shown
SIX	Destination and scheduled time-date group of arrival.	
SEVEN	Route, transshipment or supply points and scheduled time-date group of	

CODE	MEANING	REMARKS
(a)	(b)	(c)
	arrival at these points.	
EIGHT	Time allowed for unloading at destination.	
NINE	Additional information and instructions as necessary.	e.g. place and date-time group of arrival at frontier.

APPENDIX T

STANAG 2171

PROCEDURES FOR MILITARY TRAINS CROSSING FRONTIERS

Agreed English/ French Texts. STANAG 2171

DETAILS OF AGREEMENT (DofA)

PROCEDURES FOR MILITARY TRAINS CROSSING FRONTIERS

Annexes: A. Frontier Crossing Advice (Rail) (FCA (Rail))
B. Format of "FCA (Rail)" Teletype Message.
C. Format of "FCA (Rail) ECHO" Teletype Message.
D. Frontier Crossing Points. (Format only)

AGREEMENT

1. It is agreed that the NATO Army Forces use the procedures laid down in Annexes A to C to facilitate military trains crossing frontiers between NATO countries.

GENERAL

2. The "reply to transport request" (STANAG 2156) informs the units in their capacity as consignors on all the necessary details of a rail movement to be executed.

3. Units are notified in advance by AMOVPER or AMOVMAT (STANAG 2164) of an approaching rail movement.

4. The purpose of the present STANAG is to lay down procedures for transmitting to adjacent movement agencies responsible for the border crossing point on each side of the frontier information which makes possible the timely processing of a military train in the neighbouring country by the military authorities and enables such movement to be passed on and monitored without delay.

5. The processing of movements by the civil railway authorities runs parallel to this military information procedure. Close cooperation between the agencies of the railways and military movement management can therefore ensure that notifications by the military and railway authorities supplement one another and avoid duplication in reporting.

6. On principle the Frontier Crossing Advice (Rail) (FCA(Rail)) should always be transmitted as early as possible; where data is incomplete, missing items may be transmitted in a follow-on report.

7. This STANAG will not apply to the initial movements preplanned in peacetime or to the evacuation of rolling stock.

DEFINITIONS

8. For the purpose of this Agreement the term "Military Trains" is defined as those complete military trains of personnel and/or materiel which have been allocated as "international identification code number" in accordance with STANAG 2158.

STATEMENT OF DETAILS

9. Formats

a. The "Frontier Crossing Advice (Rail) (FCA (Rail))" is prepared in

one of the official NATO languages. The following formats are to be used:

—FCA(Rail)—ALPHA, see para 11a, 11b and Annex A and B.
—FCA(Rail)—ECHO, see para 11c and Annex C.
—FCA(Rail)—BIS, see para 11d.
—FCA(Rail)—ECHO-ECHO, see para 11c.

b. The classification of the message is to be left to the discretion of the originator.

c. The items on which no information is necessary or which should be omitted for security reasons when the message is transmitted in clear, shall not be mentioned.

10. Movement Agency Responsible for the Border Crossing Point

a. The military movement agency responsible for the border crossing point:

(1) Is responsible for dealing with foreign military movement agencies with regard to outgoing military trains;

(2) Is in charge of military trains arriving from abroad;

(3) Is to transmit data to the movement agencies concerned via the areas of responsibility by which the train is routed or in whose area of responsibility the train reaches its destination or crosses another frontier.

11. Procedure

a. The military movement agency of the country of origin (I) responsible for the border crossing, is to notify the military movement agency of the neighbouring country responsible for the border crossing point concerned (II) by means of a FCA (Rail) (Annexes A and B) of any intended rail movement.

b. The agency concerned of the neighbouring country (II) is to process the incoming FCA (Rail) and is to take such action as is required on the military side for the continuation of the train. It is to notify the movement agency at destination or the consignee or the movement agency of the neighbouring country (III) in case of transit.

c. After processing, a FCA (Rail)-ECHO reply is to be transmitted to the responsible movement agency of the country of origin (I) (Annex C refers) containing the following items:

(1) Time of departure after the frontier crossing (I–II);

(2) Time of arrival at destination (or at the following border crossing point (II–III));

(3) The true offloading station;

(4) Miscellaneous (additional information, desired changes, etc.).

d. In the event of another frontier crossing into a third NATO country (III), the agency of the transit country (II) is to transmit a FCA (Rail)-BIS to the movement agency responsible for the border crossing point in the country concerned.

e. On completion of processing, the agency of the country of destination (III) is to transmit a FCA (Rail)-ECHO-ECHO to the agency of the transit country (II) and the agency of the country of origin (I).

12. Deadlines for Notification

a. For normal circumstances, the FCA (Rail) is to be transmitted to the movement agency responsible for the border crossing point in the neighbouring country 48 hours before a train is due at the frontier. In exceptional circumstances this period may be reduced. For movements involving "hazardous freight" or out-of-gauge transport, notification is required earlier.

b. If several frontiers are to be crossed, the FCA (Rail) is to be dispatched sufficiently early to ensure that the movement agency respon-

sible for the last border crossing point receives the FCA (Rail)-BIS 48 hours before the arrival of the train at the first frontier to be crossed.

c. These deadlines are minimum requirements and apply to single trains only. Earlier notification is required when groups of trains are involved.

IMPLEMENTATION OF THE AGREEMENT

13. This STANAG will be considered to have been implemented when the necessary orders/instructions have been issued directing the forces concerned to put the content of this Agreement into effect.

ANNEX A (DofA) TO STANAG 2171

FRONTIER-CROSSING ADVICE (RAIL) FCA (RAIL)

From : VerkK COLOGNE Date: 12 Feb 1968
To : IV/NS UTRECHT
Info : MOD THE HAGUE—Vervoerswezen (Movements)
TBO
Depot LIESHOUT Telex 003065

Code		Meaning	Information
one		Nickname for the movement	Aida 3
two		international identification code number	3-GE-19 56321 NL
three		Number of transport schedule (optional)	
four		consignor	Depot HESEDORF
five		consignee	Depot LIESHOUT
six		personnel	
	alfa	1st class 3 persons	1 M, 2 F
	bravo	2nd class 21 persons	21 M
seven		material	
		Number of vehicles	47
eight		out of PPI gauge material	
		Number of vehicles	5
nine		other freight	
		tonnage	300 t
ten		train specifications	
	alfa	length of train	-
	bravo	weight of train (optional)	-
	charlie	total number of cars	-
eleven		loading	
	alfa	station of departure	HESEDORF (NE 132252)
	bravo	time of departure	192015 Z Feb 68
twelve		1st frontier	
	alfa	transfer station	VENLO
	bravo	time of arrival	201125 Z Feb 68
	charlie	time of departure	
		2nd frontier	
	delta	transfer station	
	echo	time of arrival	
	foxtrot	time of departure	
thirteen		offloading	
	alfa	station of destination (proposed)	
	bravo	station of destination (true)	EINDHOVEN (FS 732999)
	charlie	time of arrival	
fourteen		various remarks	
	alfa	drag damaged M47 by salvage crane	

Code	Meaning	Information
bravo charlie fifteen	person commanding personnel during movement	Lieutenant Colonel "X"

APPENDIX 1 TO ANNEX A (DofA) TO STANAG 2171

EXPLANATION CONCERNING ANNEX A

three		Number of transport schedule may be entered at discretion.	
six		Differentiate by "M" for male and "F" for female	
seven eight nine		Differentiate in broad categories only.	
ten		Since definite train specifications (length of train, weight of train, total number of cars) will not be available before the departure of the train, they should not be requested save for exceptional cases when they are actually required.	
eleven thirteen thirteen	alfa bravo charlie	To facilitate identification it is expedient to designate the loading and/or offloading station by both name and coordinates (six digits).	
twelve	alfa delta	Designation of the frontier-crossing station may be either by name plus coordinates or by reference to the list of border crossing points.	
twelve thirteen thirteen	charlie foxtrot bravo charlie	Time of departure after crossing station. Actual station of destination Time of arrival at destination	cannot be entered before receipt of FCA (Rail)-ECHO

ANNEX B(DofA) TO STANAG 2171

FCA (RAIL)

FORMAT OF A TELETYPE MESSAGE

From :	VerkK	COLOGNE	12 09 50 Z Feb 68
To :	IV/NS	UTRECHT	
Info :	MOD	THE HAGUE—Vervoerswezen (Movements)	
	TBO		
	Depot	LIESHOUT Telex 003065	
	WBK	III—Verk	

one		Aida—3
two		3—GE—19—56321—NL
four		Depot HESEDORF
five		Depot LIESHOUT
six	alfa	1 M, 2F
	bravo	21 M,
seven		47
eight		5
nine		300 t
eleven	alfa	HESEDORF (NE 132252)
	bravo	192015 Z Feb 68
twelve	alfa	GE—NL 66
	bravo	201125 Z Feb 68
thirteen	alfa	EINDHOVEN (FS 732999)
fourteen		Drag damaged M 47 with salvage crane

ANNEX C(DofA) TO STANAG 2171

FCA (RAIL)—ECHO

FORMAT OF A TELETYPE MESSAGE

From :	IV/NS	UTRECHT	131530 Z Feb 68
To :	VerkK	COLOGNE	
Info :	MOD	THE HAGUE—Vervoerswezen (Movements)	
	TBO		
	Depot	LIESHOUT	Telex 00 30 65
	subject	3—GE—19—56321—NL	

twelve	charlie	201200 Z Feb 68
thirteen	bravo	equal thirteen alfa
	charlie	201930 Z Feb 68
fourteen		agreed

ANNEX D(DofA) TO STANAG 2171

FRONTIER—CROSSING-POINTS

						CROSSING POINTS (1)							
Serial No. of Crossing Point	Military Route No.	Road Movement HQ—District	Rail Identification Marks	Rail Movement HQ—District	COUNTRY	Location add coordinates if necessary	COUNTRY	Location add coordinates if necessary	Rail Movement HQ—District	Rail Identification Marks	Road Movement HQ—District	Military Route No.	REMARKS
a	b	c	d	e	f	g	h	i	k	l	m	n	o

NOTE (1): Indicate a clearing station with an asterisk* in column g or i.

APPENDIX U

STANAG 2805-E

CLASSIFICATION OF RESTRICTIONS AFFECTING THE MOVEMENT OF CERTAIN MILITARY EQUIPMENT AND VEHICLES BY LAND ON CONTINENTAL WESTERN EUROPE

Agreed English/French Texts STANAG 2805-E

DETAILS OF AGREEMENT (DofA)

REQUIREMENTS COMMON TO MANY DIFFERENT TYPES OF EQUIPMENT USED BY NATO ARMED FORCES OPERATING IN A GROUND ROLE:

E. CLASSIFICATION OF RESTRICTIONS AFFECTING THE MOVEMENT OF CERTAIN MILITARY EQUIPMENT AND VEHICLES BY LAND ON CONTINENTAL WESTERN EUROPE

Annexes: A (DofA)—Road Movements.
B (DofA)—Rail Movements.

AGREEMENT

1. The NATO Armed Forces agree to take into consideration the clearance dimensions set forth in Annexes A and B (DofA) of this STANAG for movement of certain military equipment and vehicles which are likely to be moved by road and/or rail in Continental Western Europe.

GENERAL

2. Land movement of certain military equipment and vehicles entails different types of restriction according to the method of movement used:

a. By Road. By road, the limitations of class and gauge imposed by the different nations call for the application of special procedures and, where necessary, specialised methods, to effect movement of certain equipments and vehicles whether loaded or not.

b. By Rail. By rail, specific technical limitations of class and guage makes it necessary to take special technical measures to render the transport of certain equipments and vehicles possible.

3. Annex A (DofA) outlines, with regard to each nation, the class and gauge limits beyond which a road movement becomes a special movement as regards that particular action.

4. Annex B (DofA) outlines:

a. The maximum rail gauge to be adopted by the Continental Western European nations, with a view to reducing the amount of checking of safety margin details and allowing the movement of normal traffic.

b. The maximum characteristics that should be observed in the construction of equipment so that it can be transported over the rail networks of those countries.

IMPLEMENTATION OF THE AGREEMENT

5. This STANAG will be considered to have been implemented when the necessary orders/instructions to adopt the method mentioned in the Agreement have been issued to the forces concerned.

ANNEX A (DofA) TO STANAG 2805-E

ROAD MOVEMENTS

Appendix: 1 to Annex A (DofA)

INTRODUCTION

1. The expression "Road Movement of Special Vehicles" means movement of vehicles with or without load which because of their class and/or dimensions require special routing arrangement.

LIMITATIONS AFFECTING THE ROAD MOVEMENT OF MOTOR VEHICLES

2. The conditions for the road movement of military equipment and vehicles are governed by the capabilities of existing road networks as defined in STANAG 2151. Further, the special regulations in force in the different countries place certain limitations on ordinary road movements of:

a. Individual wheeled or tracked vehicles, whether loaded or not.

b. Articulated vehicles consisting of a prime mover and semi-trailer.

c. Articulated trains of vehicles consisting of a tractor and one or more trailers.

d. Passenger transport vehicles (motor coaches).

3. These limitations, details of which are given at Appendix 1 to this Annex for each country concerned with this Agreement, relate to some or all of the following characteristics of the equipment referred to in paragraph 2 above:

a. Width measured on any cross-section, including all projections.

b. Length (of vehicle or train of vehicles), including all projections and, where applicable, length of each part of the train: tractor + trailer(s).

c. Total height of the vehicle, including load, if any.

d. Turning radius.

e. Class of vehicle (or train of vehicles), calculated according to the method laid down in STANAG 2021.

RULES GOVERNING ROAD MOVEMENT OF SPECIAL VEHICLES

4. Any road movement of military equipment and vehicles of which one or more of the characteristics listed in paragraph 3 above exceeds the corresponding limitation(s) imposed by the regulations in force in one of the countries it will have to cross (See Appendix 1 to this Annex) constitutes a "movement of a special vehicle" in the country concerned. It is then subject to the rules given below.

5. Any movement of special vehicles except those exempted by bilateral agreement supplementing the NATO Status of the Forces Agreement, should be requested on a Road Movement Bid as laid down in STANAG 2155. The request is forwarded through the normal movements channels by the originating military authority to the territorial military authority of the country in which the movement becomes a movement of a special vehicle.

6. The territorial military authority concerned will implement the Road Movement Credit for special vehicles in accordance with the procedure in force in the country concerned and will notify the authority originating the movement of its decision. Such notification may include in addition to the normal headings of a standard Movement Credit (c.f. STANAG 2155) the following instructions or information:

a. Special safety and/or traffic regulations imposed by day and, where applicable, by night (c.f. STANAG 2024) and the facilities to be provided to this end. This facility may be provided by the host nation.

b. Military or civilian authority or authorities of the Host Nation which the head of the "road movement of a special vehicle" may contact in case of need.

NOTE: To simplify the execution of road movements of special vehicles, Nations are recommended to prepare a documentation (in map or any other form) showing the route and any special characteristics of the itineraries suitable for such movements.

APPENOIX 1 TO ANNEX A(OofA) TO 5TANAG 2805-E

CLAS5IFICATION OF LIMITATION5 AFFECTING THE ROAO MOVEMENT OF MOTOR VEHICLES
REGULATION5 IN FORCE IN NATO COUNTRIE5

Country	Width including all projections	LENGTH OF VEHICLE5				Motor Coach	Total Height (including load)	Turning Radius	Class (5TANAG 2021)
		5ingle Vehicles	Articulated Vehicle (prime vehicle and semi-vehicle)	Articulated train of vehicles (tractor & trailer(s))					
				Total length of train	Length of one UNIT				
1	2	3	4	5	6	7	8	9	10
BELGIUM	2m50	12m	15m	18m	11m (1)	12m	4m	-	≤50
CANADA	2m438(8')	10m058(33')	15m240(50')	15m240(50')	-	10m058(33')	3m81(12'6")	-	-
DENMARK	2m50	10m or 12m(2)	14m	18m	10m	12m	3m60	-	≤35
FRANCE	2m50	11m	15m	18m	11m (1)	12m	-	-	≤50
Fed Rep of GERMANY	2m50	12m	15m	18m	-	12m	4m	-	≤50 (9)
GREECE	2m50	10m or 11m (3)	14m	18m	-	12m	3m8	-	-
ITALY	2m50	11m (3)	14m	18m (10)	11m (5)	11m	4m	10m (11)	≤50 (7)(8)
LUXEMBOURG	2m50	Note (6)	15m	20m	11m (3)	12m	4m	-	≤40
ETHERLANDS	2m50	11m	15m	18m	-	12m	4m	-	≤50 (4)
ORWAY	2m25	12m	15m	18m	-	12m	3m	-	≤50
PORTUGAL	2m45	10m	12m	14m	10m	10m30	4m	-	≤50
TURKEY	2m50	10m	14m	16m	-	11m	3m80	-	-
UNITED KINGOOM	2m50 (8'2½")	11m (36'1½")	15m (49.21')	18m(59'0 5/8")	9m144 (30')	11m(36'1½")	No LIMIT (12)	-	≤50
UNITEO STATE5	2m438(8')	10m668(35')	15m240(50')	18m288 (60')	10m668(35') (1)	12m192(40')	3m81(12'6")	-	≤50

NOTES:
(1) Exclusive of coupling device on trailer.
(2) Lorry with 2 axles: 10m; other vehicle: 12m
(3) Motor vehicle with 3 or more axles: 11m. Motor vehicles with only 2 axles: 10m (ITALY - motor coaches excluded).
(4) Maximum tyre-load: 5000 kg.
(5) This figure concerns the tractor only: the length of the trailer cannot exceed 6m for 1 axle trailer, 7m50 for 2 axle trailer, 8m for 3 or more axle trailer.
(6) Vehicle with one axle: 7m. Vehicle with 2 axles: 10m. Vehicle with 3 axles or more: 12m.
(7) Maximum load:
(a) Motor vehicles and trailers - with ground pressure 8 kg/cm^2: 14,000 kg (2 axles); 18,000 kg (3 axles*); 22,000 kg (4 or more axles*).
*with a distance of 1m between two axles.
(b) 8usses: 15,000 kg (2 axles); 19,000 kg (3 axles).
(c) Tractors and semi-trailers: 14,500 kg. Under the condition indicated in (a) above: 18,000 kg (3 axles); 28,000 kg (4 axles); 32,000 kg (5 or more axles).
(d) In any case, maximum load on each single axle 10,000 kg; on 2 axles (at a distance of 2m) 14,500 kg.
(8) Highways only can be considered very heavy traffic routes (Class 120) but they cannot be used in peacetime by tracked vehicles.
(9) Maximum load per single axle: 8 tonnes. Load on driving axle of vehicle: 10 tonnes. Load per double axle: 14.5, and providing there is a minimum wheelbase of 1.3m, 16.0 tonnes.
(10) The total length should be less, if conditions of column n.9 cannot be satisfied.
(11) Each vehicle (single, articulated or train) should be included in a 4m. 50 wide circular crown of turning way. The internal radius of this circular crown cannot be longer than 10 m.
(12) No limit is imposed on height in the UK but on some secondary roads bridges may give only 3m 962(13') headroom, on main roads 4m 572(15') is general.

ANNEX B (DofA) TO STANAG 2805-E

RAIL MOVEMENTS

Appendices: 1 to 8 to Annex B (DofA)

LOADING GAUGES

1. A loading gauge exists for railroad transport and has already been covered by international agreement. It is the PPI Gauge (passe-partour international) which is shown on the dimensioned diagram at appendix 1 to this Annex. (The detailed dimension of the lower parts which do not affect loading conditions are not reproduced on the diagram).

2. A load not exceeding this gauge can travel without limitation on most of the Continental Western Europe lines.

3. A certain number of existing military equipment, heavy or cumbersome, does not come within this gauge when it is loaded on commercial types of waggons adapted to its tonnage.

4. For technical and military reasons it is not always possible to restrict the manufacture of all future equipment to dimensions which are compatible with the limitations of this gauge. In addition, it does not appear to be possible to modify to an acceptable extent the existing rolling stock of the different railroad companies. Although the need to reduce the height is taken into account in the manufacture of new equipment, this is not sufficient because the width of the equipment to be carried affects essentially the infrastructure.

5. Under the conditions of paragraph 4, the PPI gauge is insufficient for the conveying of heavy or cumbersmme military equipment which, for this reason, has been called "out-of-gauge equipment".

6. In view of the relatively large number and tactical importance of these equipments it is not possible to:

a. Subject them automatically to particular movement regulations which require a preliminary survey of special routes the number of which is too restricted and sometimes too difficult to draw up (existing itineraries for "out-of-gauge convoys"), as this would be likely to hinder the movement of ordinary equipment.

b. Preclude them deliberately from being conveyed by rail as this would delay considerably their movement to the area where they would be used.

7. The aim has therefore been to find a larger gauge which would enable most of this equipment to be conveyed on existing waggons on the greatest number of itineraries possible though this would entail the carrying out of alternations on the most restricted lines. This gauge which is a compromise between the requirements and capabilities, has been called "TZ gauge" and is shown on the dimensioned diagram at Appendix 2 to this Annex.

8. A line is said to be available for TZ gauge traffic when it satisfies the following conditions:

a. In the case of a single track line, the TZ gauge must be cleared without restriction throughout its length.

b. In the case of a double track line, simultaneous movement of TZ gauge and PPI gauge equipment must be possible throughout its length in any direction without any restriction other than at a few special points where passing is not allowed. Each nation has to take into account the fact that the gauge TZ is defined for a load of a length not exceeding 283 7/16" (7.20 metres) on a waggon of the same wheel-base. (The maximum dimensions for the width of a load of different length on

a waggon having a different wheel-base are defined further on in the STANAG.)

9. It is very desirable that all the lines of all European networks be able to meet these minimum requirements. In view of the fact that it is not yet so (especially as regards the French and Italian networks), the TZ gauge can only be considered as a limiting gauge for restricted movement.

ADOPTION OF THE TZ GAUGE AS THE LIMITING GAUGE FOR RESTRICTED MOVEMENT

10. The TZ gauge as defined in the dimensioned diagram at Appendix 2 has been agreed as being the limited gauge for restricted movement on the railroad networks of Central Europe, DENMARK and ITALY. However, it is understood that all loads exceeding the gauge normal to each administration will continue to be considered as abnormal load and will be the subject of special consideration by the Railway Administration.

DEFINITION OF THE LIMITING STANDARDS FOR EQUIPMENT

11. The limiting loading gauge having been defined, the limiting standards for equipment depend upon the characteristics of the carrying waggons.

12. Flat waggons have been divided into two groups:

a. Ordinary Waggons.

b. Special Waggons.

13. Ordinary waggons form the greater part of the railroad companies' rolling stock. They are of many different types and a parallel classification of waggons and equipment is under study for the European area. However, many of these waggons have the same average characteristics as regards the height of the floor. Standards A and B1 (see para 15) are based on these average standards.

14. Special waggons, although far less numerous are nevertheless classified by the Centre-Europe Committee of PBEIST into 5 categories (document AC/15 (CE)D/45), only four of which (5, 6, 7 and 8) are of real value for the carrying out of military movements.

15. In terms of the above factors (TZ and PPI gauges and characteristics of waggons) military equipment can be classified in the following 3 groups:

a. *Normal Movement* equipment clearing the PPI gauge on ordinary waggons (Group A).

b. *Restricted Movement* B1 equipment clearing the TZ gauge on ordinary waggons—B2 equipment clearing the TZ gauge on special waggons (Group B).

c. *Difficult or impossible movement* equipment exceeding the TZ gauge on any type of waggon (Group C).

16. The category "equipment clearing the PPI gauge on special waggons" need not be considered as this case arises very rarely in practice.

17. Owing to the diversity of special waggons, it has been found necessary to divide B2 category "equipment clearing the TZ gauge" (see paragraph 15b.) into three sub-categories.

18. Five limited standards have been defined for the manufacture of equipment likely to be conveyed by rail; these standards correspond to the various types of waggon and were selected in the following way: in each category, those waggons were selected, from among the current types, which imposed the most limiting conditions, so that the standards will be valid, in fact, for a large number of waggons; an essential characteristic of the waggons for movement within the curves is the wheel-base of the waggon; the distance between the axis of the outside axles

for simple axle waggons and the distance between the pivots of the bogies for waggons constructed with bogies (1). An off-centre correction is given for each standard: a maximum length has also been laid down for the load. Any load complying with these standards can be moved as a "TZ load" in accordance with the definition given in para 8, on any railroad on which the curve radius is 492 ft (150 metres) or more. Paras 25 and 28 explain how the dimensions of these standards should be reduced in the case of longer loads.

NOTE: On the diagrams and the graph which constitute the Appendices to this Annex, the following code has been used:

1 = width of load
1m = maximum width (width between outside edges of tracks)
d = width of tracks
= length of load
a = wheel-base of waggon (distance between outside axles or pivots of bogies).

Unless otherwise stated, the measurements given on the diagrams are in millimetres. On the graph, the measurements are in metres.

19. Standard A. This is the standard for equipment clearing the PPI gauge on ordinary waggons (para 15a.) with off-centre correction of 1 9/16" (40mm). The standard waggon selected is one having a width of 101 3/16" (2.57 m) maximum height of loading floor 50 3/8" (1.28 m) and wheel-base of 315" (8 m); the maximum length and the maximum STANAG class selected are 413 3/8" (10.5 m) and class 12 respectively; this corresponds to what is possible with existing waggons. The diagram of the Standard given in Appendix 3 shows maximum dimensions:

a. For a wheeled vehicle loaded on to a waggon having 23 5/8" (600 mm) sides.

b. For a tracked vehicle loaded on to a waggon without sides, it is accepted that the tracks may project sideways by half a width, with a safety margin of 1 31/32" (50 mm).

20. Standard B1. This is the standard for equipment clearing the TZ gauge on ordinary waggons (para 15b.) with off-centre correction of 1 9/16" (40 mm). The standard waggon selected and the maximum length are the same as for Standard A. For Standard B1, see diagram at Appendix 4. It should be noted that, since the loading floor is at a height of less than 51 19/32" (1.31 m) (2), the dimensions of the lower parts of the load (in particular, the width taken between the outer edges of the tracks) do not exceed those of Standard A.

(To take account of developments in the waggon pool of the railway companies, a new standard, which could be called B11, is under study; if necessary, it could be introduced into this STANAG in addition to or in place of Standard B1.).

21. Standard B21. This standard relates to equipment clearing the TZ gauge on special waggons (para 15c.). The standard waggon selected is one of the E4 classification. E4 waggons, which constitute category 8 of the PBEIST classification (para 14) all have very similar characteristics, in particular:

width of floor 124" (3.15 m)

NOTE (1) This wheel-base is marked "a" on the diagrams.

NOTE (2) Level above which the TZ gauge is wider than the PPI gauge.

height of floor	51 19/32" (1.31 m)
wheel-base	283 7/16" (7.20 m)

on the basis of a maximum length of 283 7/16" (7.20 m) for leading, therefore, the standard "TZ" load defined in para 8 is arrived at. Thus, the only reductions to be made to dimensions of the vehicle in relation to the gauge are those resulting from the loading tolerance; in order to make the fullest possible use of the advantages inherent in these waggons, which are the most useful for the transport of heavy tanks, it has been agreed that loading should be effected with particular care and the off-centre correction has been reduced to 19/32" (15 mm). The diagram of this standard is given in Appendix 5.

22. Standard B22. This standard relates to wheeled equipment clearing the TZ gauge on special waggons of category 5 in the PBEIST classification. The floor width of the majority of these waggons (classification index E2) is 111 13/32" (2.83 m), the floor height is 50" (1.27 m) and the wheel-base 366" (9.30 m); this is the standard waggon which was selected for the laying down of the standard, accepting a maximum length of load of 433" (11 m) and an off-centre correction of 1 9/16" (40 mm). The diagram of this standard is given in Appendix 6.

23. Standard B23. This standard also relates to wheeled equipment clearing TZ gauge on special waggons. The characteristics of the standard waggon selected are as follows:

maximum height of actual floor	:	53 9/16" (1.36 m)
maximum height on bearing joists	:	57 3/32" (1.45 m)
wheel-base	:	503 15/16" (12.80 m)
maximum load corresponding to STANAG class	:	Approximately 30

Such waggons fall into category 4 of the PBEIST classification; they are relatively narrow, often have metal floors and are not generally used in peacetime for the transport of vehicles; they can however be useful in wartime. The standard has been laid down for a maximum length of load of 15 m and an off-centre correction of 1 9/16" (40 mm). The corresponding diagram is given in Appendix 7.

24. In order to enable military equipment to be transported rapidly and without delay due to a long preliminary study, it is necessary that its transversal measurements be no greater than the standards given above.

25. Details are given below of the exceptions which, in theory, might possibly be made to these standards, but it is pointed out that, in practice, it would be very difficult to benefit from such exceptions. If the stock of special flat waggons of Continental Western Europe were considerably modified, it would be preferable to lay down a new standard allowing for the rational use of new types of waggons, if the number of these justified such action.

a. For equipment of a length considerably less than the maximum length referred to in the standards, the widths could be increased as indicated in para 28.

b. In the same way, if waggons having a shorter wheel-base than that laid down were available, either the length or the width of the load could be increased but this would undoubtedly be even more difficult than in the previous case.

26. It could of course be agreed that auxiliary components of the equipment to be transported be allowed to exceed the limits of the standard, provided they can be either detached or dismantled.

27. All equipment, the transverse dimensions of which exceed the limits of the standards and the conditions laid down in paras 25 and 26, would

fall into Group C (para 15c.) and its conveyance by rail would be very problematic in view of the limitations which could be imposed.

28. The graph at Appendix 8 provides a means of determining what modifications as described in paras 25a. and 25b. can be made to the standards; the graph shows the relationship between the maximum values for the wheel-base of the waggon 'a', the length of the load 'L' and the width of this load '1' found at the widest point of the vertical part of the limited envelope curve.

a. The graph has been drawn on the hypothesis that the load is centred on the waggon; in practice, therefore, the value 'c' of the off-centre correction must be applied to the value of 1 obtained from the graph:

—to find the maximum width corresponding to a given width 1, read off from the graph, twice the corresponding correction must be subtracted ($1_m = 1 - 2c$);

—where the width of the load 1_m is known, the appropriate length L is obtained by adding to this known width twice the off-centre correction, to find the value of 1 to be used on the graph ($1 = 1_m + 2c$).

b. The width 1, read off from the graph and then reduced by subtraction of the off-centre correction, is that of the lower part of the load; it is, therefore, less than the limit of 3.54 m by an amount 's' ($s = 3.54 - 1 + 2c$):

—to find the width of the load at a given level, subtract 's' from the corresponding value of the TZ gauge;

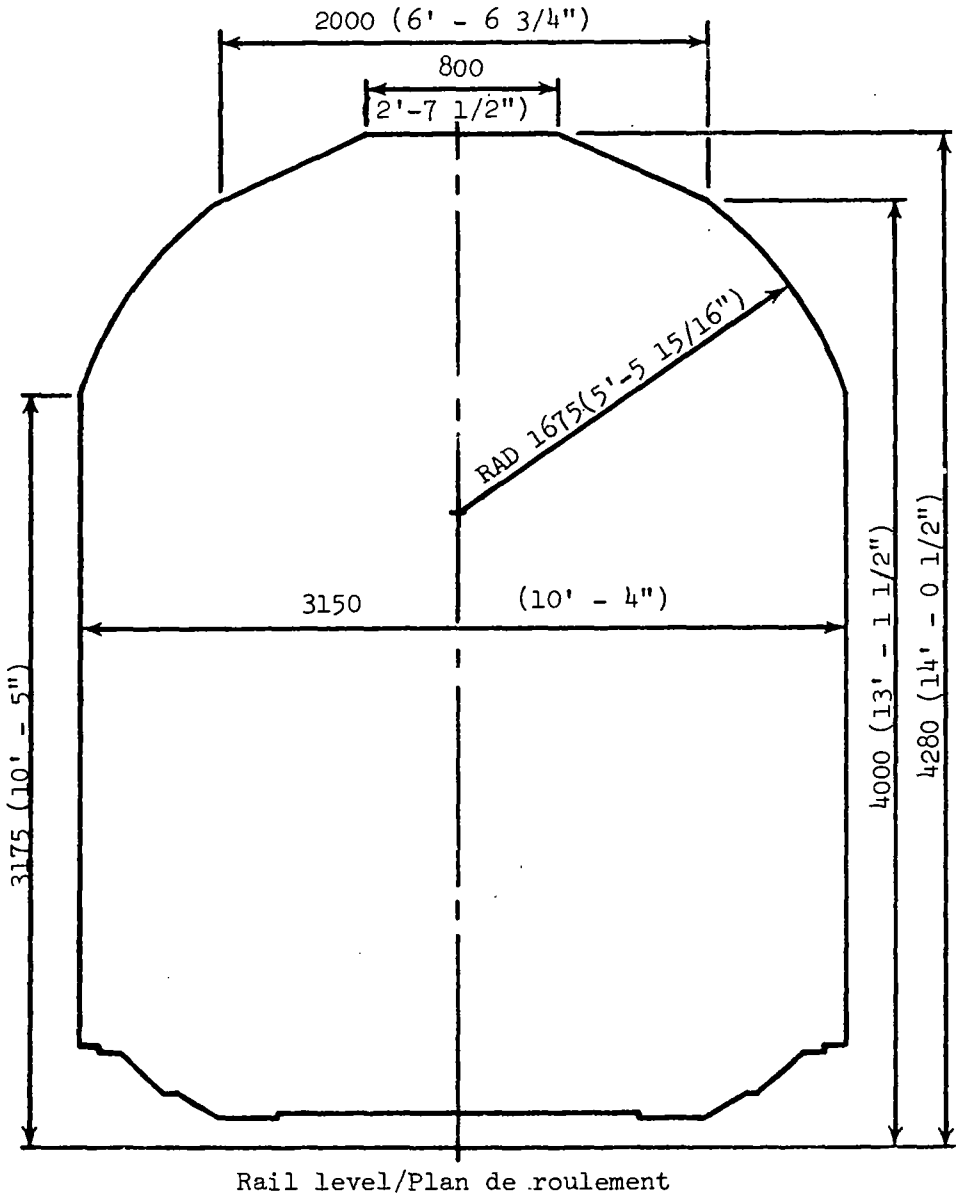
—conversely, where the width of a load at a given level is specified, the difference 's' between this value and the corresponding value of the TZ gauge can be calculated; the width 1 to be used on the graph will be the value of "3.54 – s" to which should be applied the off-centre correction ($1 = 3.54 - s + 2c$).

APPENDIX 1 TO ANNEX B (DofA)
TO STANAG 2805-E

APPENDICE 1 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

PPI (PASSE-PARTOUT INTERNATIONAL) GAUGES/GABARIT PPI

Dimensions shown thus: millimetres (feet-inches)
Les dimensions sont indiquées comme suit:
millimètres (feet-inches)



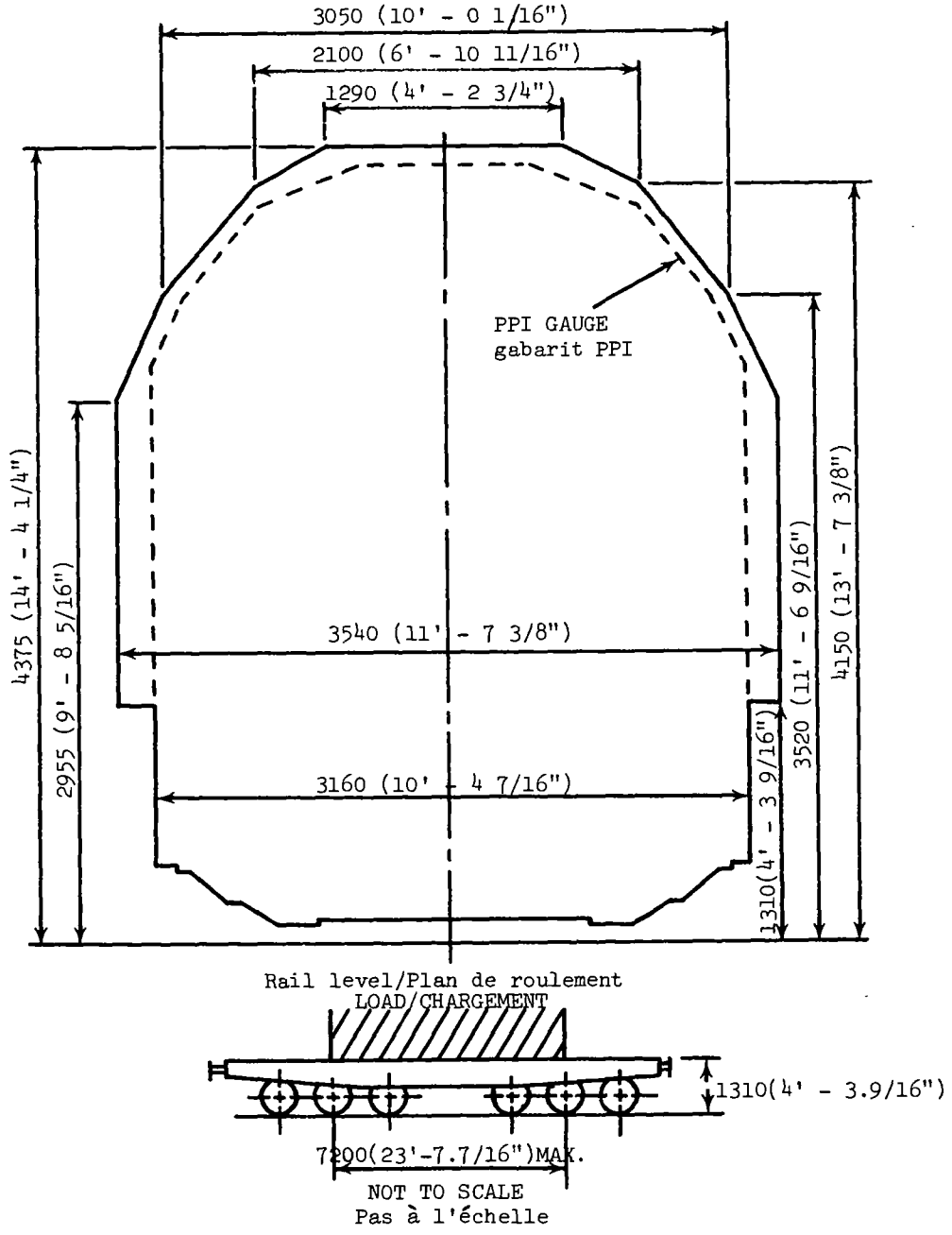
Rail level/Plan de roulement

APPENDIX 2 TO ANNEX B (DofA)
TO STANAG 2805-E

APPENDICE 2 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

TZ GAUGE/GABARIT "TZ"

Dimensions shown thus: millimetres (feet-inches)
Les dimensions sont indiquées comme suit:
millimètres (feet-inches)



B-2(DofA/MdeA) - 1

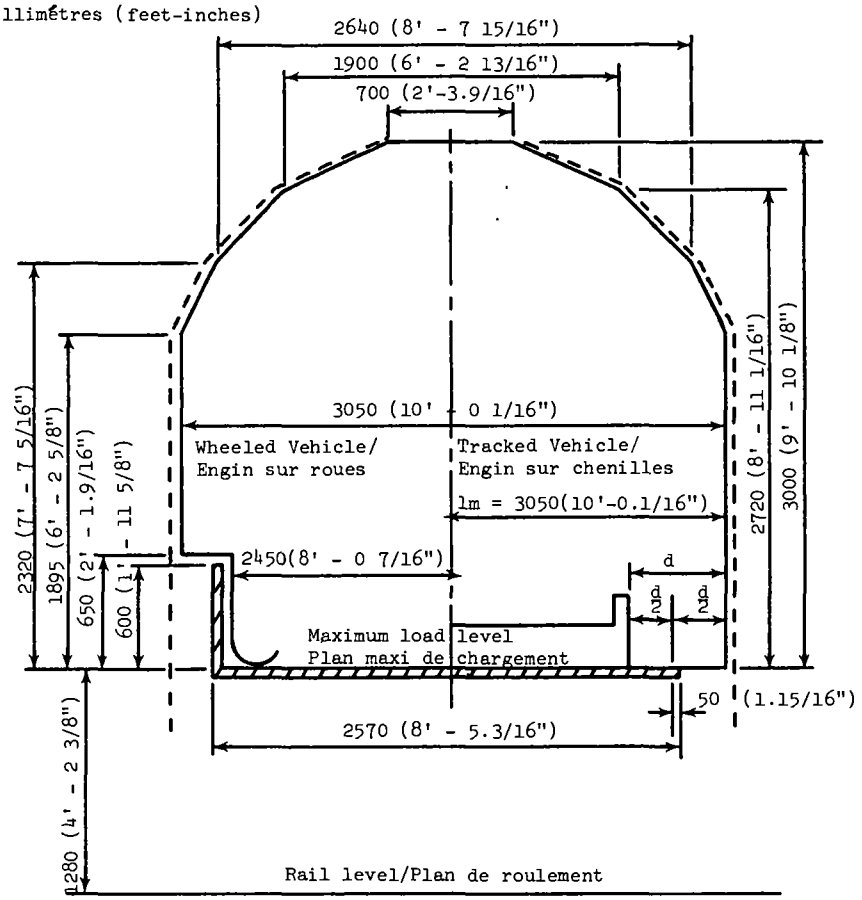
APPENDIX 3 TO ANNEX B (DofA)
TO STANAG 2805-E

APPENDICE 3 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

MANUFACTURE GAUGE FOR MILITARY VEHICLES/GABARIT DE CONSTRUCTION POUR LES VEHICULES MILITAIRES STANDARD/NORME A

Dimensions shown thus:
millimetres (feet-inches)
Les dimensions sont indiquées comme suit:
millimètres (feet-inches)

Off centre correction./ Tolerances de centrage : ± 40mm (1.9/16")



——— Manufacture Gauge/Gabarit de construction

— — — P.P.I. Loading Gauge/Gabarit de chargement PPI
maximum length/longueur maxim:
10500mm (34' - 5 3/8")

Maximum STANAG classification: 12 (Approx)
Class STANAG maxi: 12 (approximativement)

(1) For a tracked vehicle, the maximum width from the outside of the tracks (lm) must not exceed 3050mm (10' - 0.1/16") and must be compatible with lm ≤ 2570mm + d - 100 mm (8' - 5.3/16" + d - 3 15/16")
Pour un engin chenillé la largeur maxi prise à la extérieur des chenilles(lm) ne devra pas depasser 3050 mm (10' - 0.1/16") et rester compatible avec la formule
lm ≤ 2570mm + d - 100 mm (8' - 5.3/16" + d - 3 15/16")

d: being the width of a track/
étant la largeur d'une chenillé

Any component outside this gauge must be capable of being detached or dismantled./

Tout élément dépassant le présent gabarit doit etre rendu amovible ou démontable.

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APPENDIX 4 TO ANNEX B (DofA)
TO STANAG 2805-E

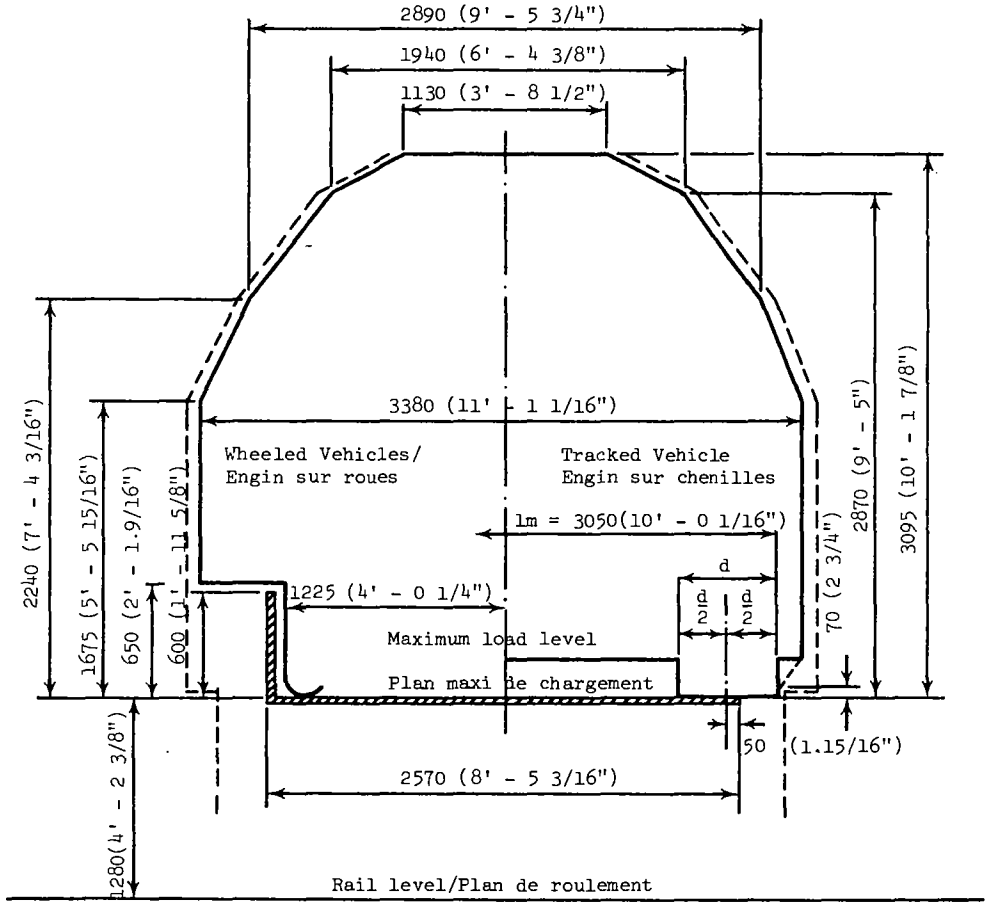
APPENDICE 4 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

MANUFACTURE GAUGE FOR MILITARY VEHICLES/GABARIT DE CONSTRUCTION POUR LES VEHICULES MILITAIRES STANDARD/NORME B1

Dimensions shown thus:
millimetres (feet-inches)

Les dimensions sont
indiquées comme suit:
millemètres (feet-inches)

Off-centre correction/
Tolerances de centrage : $^{+}_{-}$ 40 mm (1.9/16")



——— Manufacture Gauge/
Gabarit de construction
— — — Tz Loading Gauge/
Gabarit de chargement Tz

Maximum Length/Longueur Maximum:
10500 mm (34' x 5 3/8")
Maximum STANAG classification: 12 (approx)/
Class STANAG maxi: 12 (approximativement)

(1) For a tracked vehicle the maximum width from the outside of the tracks(lm) must not exceed 3050mm (10' - 0.1/16") and must be compatible with lm ≤ 2570 mm + d - 100 mm (8' - 5.3/16" + d - 3 15/16").
Pour un engin chenillé la largueur maxi prise à l'extérieur des chenillés(lm) ne devra pas depasser 3050 mm (10' - 0.1/16") et rester compatible avec la formule:
lm ≤ 2570 mm + d - 100 mm (8' - 5 3/16" + d - 3 15/16").

d: being the width of a track/
étant la largueur d'une chenillé

Any component outside this gauge must be capable of being detached or dismantled./

Tout élément dépassant le present gabarit doit être renu amovible ou démontable.

APPENDIX 5 TO ANNEX B (DofA)
TO STANAG 2805-E

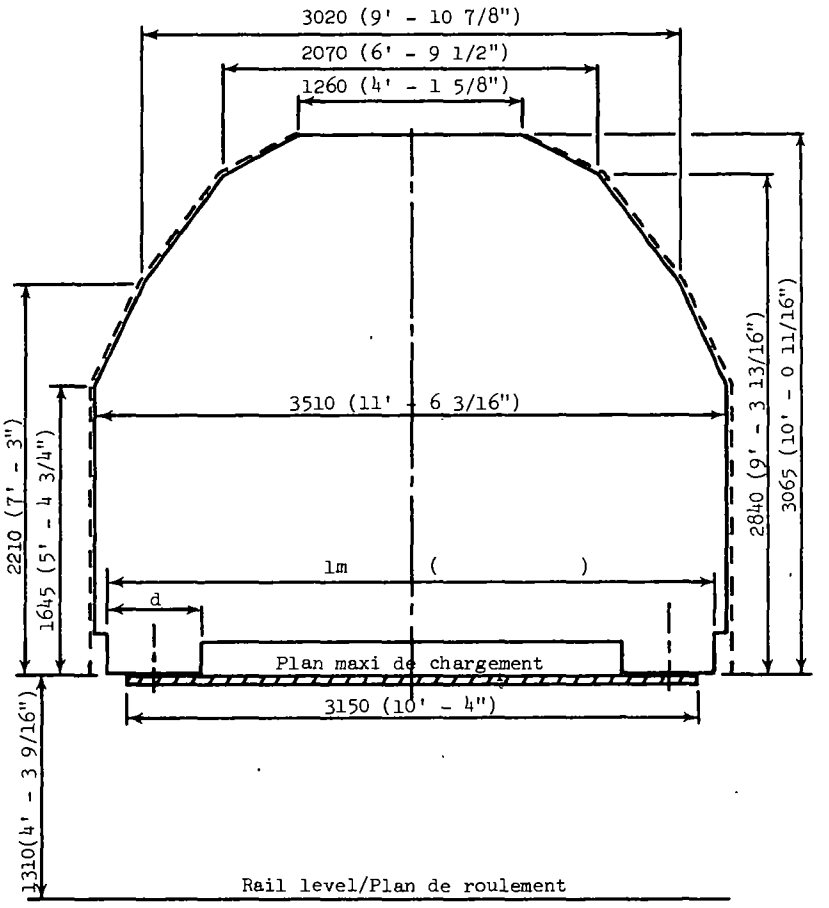
APPENDICE 5 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

MANUFACTURE GAUGE FOR MILITARY VEHICLES/GABARIT DE CONSTRUCTION POUR LES VEHICULES MILITAIRES STANDARD/NORME B21

Dimensions shown thus:
millimetres (feet-inches)

Off-centre correction/
Tolerances de centrage : $^{+}_{-}$ 15 mm (19/32")

Les dimensions sont
indiquées comme suit:
millemètres (feet-inches)



——— Manufacture Gauge/
Gabarit de construction

– – – Tz Loading Gauge/
Gabarit de chargement Tz

Any component outside this gauge must be capable of being detached or dismantled./

Tout élément dépassant le présent gabarit doit être rendu amovible ou démontable.

Maximum Length/Longueur Maximum: 7200 mm (23' - 7 7/16")
Maximum STANAG classification: 70 (Approx)/
Class STANAG maxi: 70 (approximativement)

lm: the maximum width from the outside of the tracks, must not exceed 3510 mm (11' - 6 3/16") and must be compatible with the formula:
lm < 3150 mm + d - 100 mm (10' - 4" + d - 3 15/16")

lm: la largeur maximum prise à l'extérieur des chenilles ne devra dépasser 3,510 mm et rester compatible avec la formule:
lm < 3150 mm + d - 100 mm (10' - 4" + d - 3 15/16")

d: being the width of a track/etant la largeur d'une chenille

APPENDIX 6 TO ANNEX B (DofA)
TO STANAG 2805-E

APPENDICE 6 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

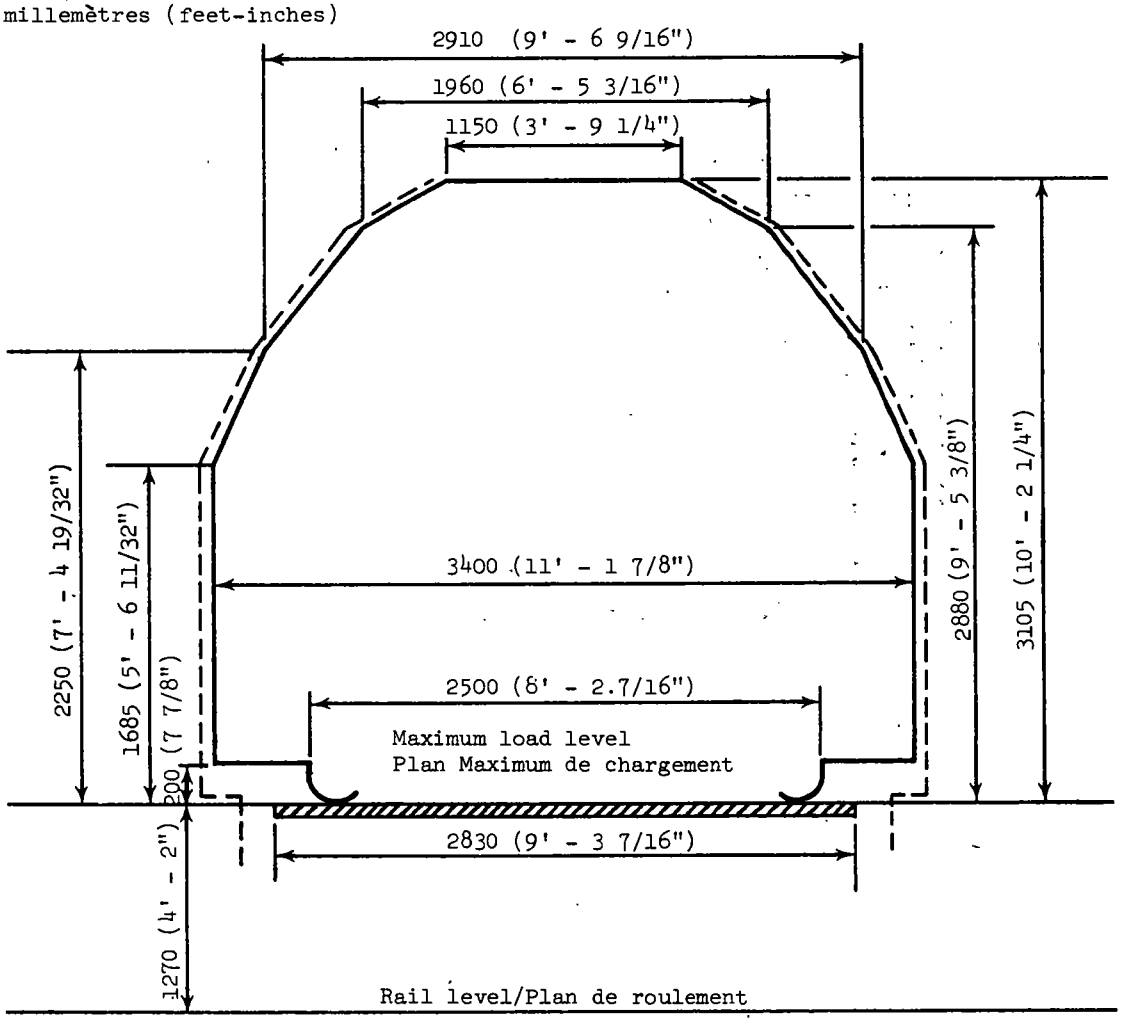
MANUFACTURE GAUGE FOR MILITARY VEHICLES/GABARIT DE CONSTRUCTION POUR LES VEHICULES MILITAIRES STANDARD/NORME B22

Dimensions shown thus:
millimetres (feet-inches)

Off-centre correction/
Tolerances de centrage : $^{+}_{-}$ 40 mm (1.9/16")

Les dimensions sont indiquées comme suit:
millemètres (feet-inches)

WHEELED VEHICLES/VEHICULE SUR ROUES



Any component outside this gauge must be capable of being detached or dismantled./

Tout élément dépassant le présent gabarit doit être rendu amovible ou démontable

——— Manufacture Gauge/Gabarit de construction

– – – TZ Loading Gauge/Gabarit de chargement TZ
Maximum Length/Longueur Maximum:
11000 mm (36' - 1.1/16")

Maximum STANAG classification: 30 (approx)
Class STANAG maxi: 30 (approximativement)

APPENOIX 7 TO ANNEX B (DofA)
TO STANAG 2805-E

APPENOICE 7 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

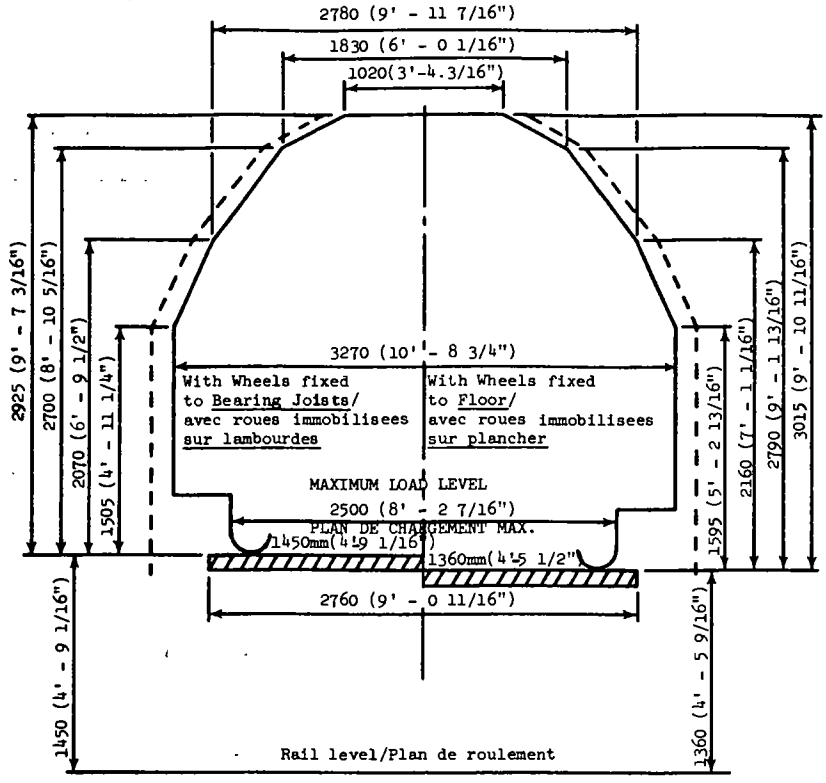
MANUFACTURE GAUGE FOR MILITARY VEHICLES/GABARIT OE
CONSTRUCTION POUR LES VEHICULES MILITAIRES
STANOARO/NORME B23

Dimensions shown thus:
millimetres (feet-inches)

Off-centre correction/
Tolerances de centrage : ± 40 mm (1.9/16")

Les dimensions sont
indiquées comme suit:
millemètres (feet-inches)

WHEELED VEHICLES/VEHICULE SUR ROUES



——— Manufacture Gauge/Gabarit de construction

– – – TZ Loading Gauge/Gabarit de chargement TZ
maximum Length/Longueur Maximum 15000 mm
(49' - 2 1/2")

Maximum STANAG classification: 30 (approx)
Class STANAG maxi: 30 (approximativement)

Any component outside this gauge must be capable of being detached or dismantled./

NOTE: The right hand diagram shows the maximum height permissible for the manufacture of a vehicle which would be loaded on the floor and not on bearing joists./

Tout élément dépassant le présent gabarit doit être rendu amovible ou démontable

NOTA: La 1/2 vue de droite indique les possibilités de hauteurs maxima de construction d'un vehicule dont les points d'appuis sur wagon seraient situés sur le plancher, en dehors des lambourdes.

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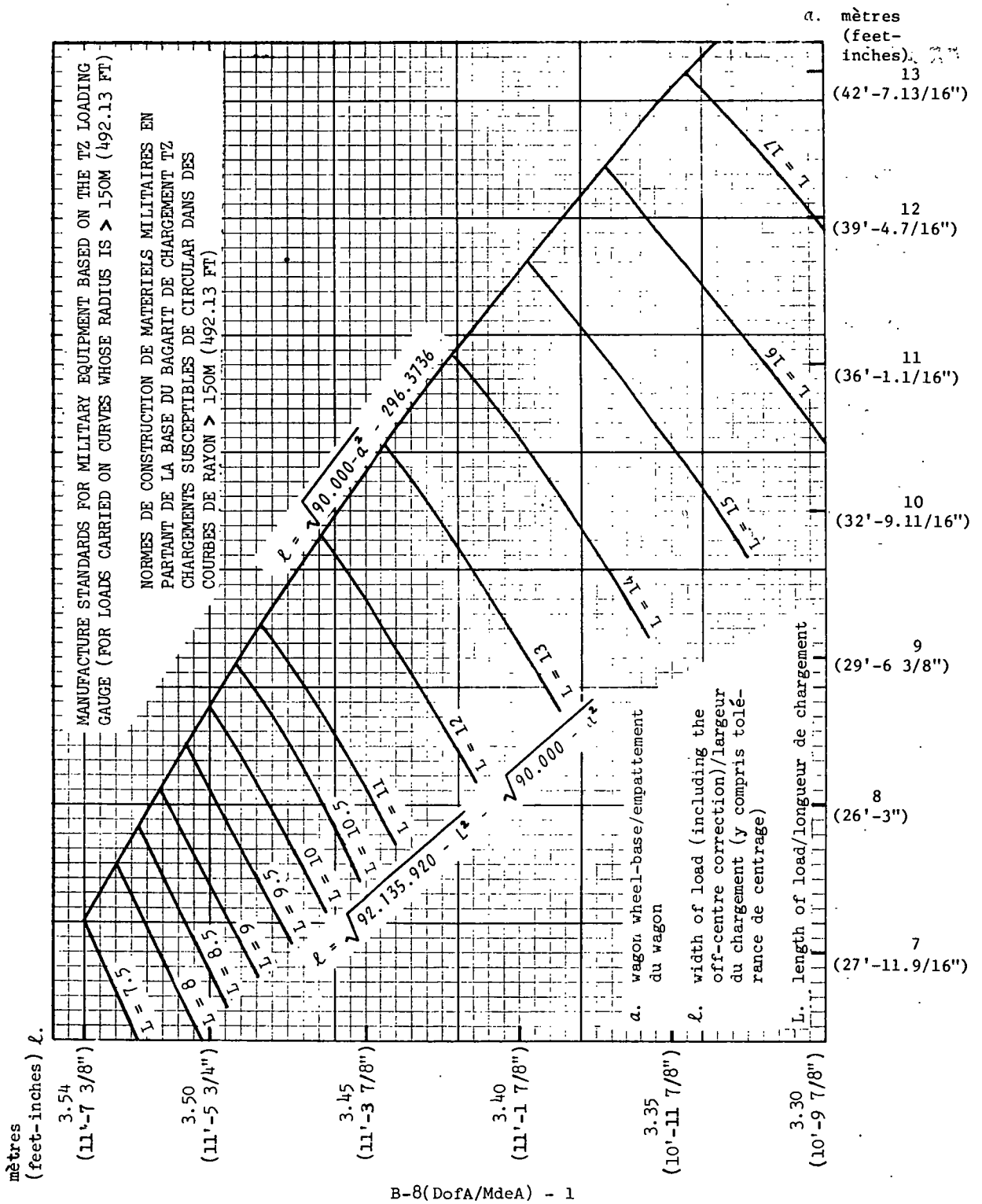
APPENDIX 8 TO ANNEX B (DofA)
TO STANAG 2805-E

APPENDICE 8 A L'ANNEXE B
(MdeA) AU STANAG 2805-E

GRAPH/ABAQUE



B-8(DofA/MdeA) - 1

APPENDIX V

STANAG 3344 (EDITION NO. 3)

PROCEDURES FOR TRACING AND DISPOSING OF AIR BAGGAGE

STANAG 3344
(Edition No. 3)

Original English/French translation

DETAILS OF AGREEMENT (DofA)

PROCEDURES FOR TRACING AND DISPOSING OF AIR BAGGAGE
(BAGLO/TROBAG)

Annexes : A (DofA). Lost Air Baggage Message (BAGLO)
B (DofA). Found Air Baggage Message (TROBAG)
C (DofA). Found Air Baggage Addresses

AGREEMENT

1. Participants agree to use a standard method to report and to initiate tracing action on air baggage reported as lost (accompanied air baggage separated from its owner en route), and to use a standard method to inform and to seek disposal on air baggage reported as found (unclaimed baggage located aboard an aircraft or at an air terminal).

NOTES: 1. Unaccompanied air baggage is included in the term 'cargo' and does not fall within the provisions of this agreement.
2. Throughout this Agreement the word 'baggage' refers to air transported baggage.

PROCEDURES

2. Units of NATO forces may communicate directly on matters pertaining to lost and found air baggage.

3. Lost Air Baggage. A lost air baggage message (short title 'BAGLO') will be despatched immediately to the emplanement airfield, to each en route stop, and to the final destination of the flight. The composition of this message will be as shown at Annex A.

4. Found Air Baggage. A found message (short title 'TROBAG') will be despatched to the units mentioned at Annex C for each NATO Nation. The composition of this message will be as shown at Annex B.

5. Disposal of Unclaimed Air Baggage. Where disposal of air baggage to its rightful owner cannot be accomplished, ultimate disposal will be effected in accordance with the following instructions for each NATO nation concerned.

a. BELGIUM	:	AP 3150, RAF Manual of Movements (Modified to apply to BELGIUM).
b. CANADA	:	Canadian Forces Administrative Order 25.2.
c. GERMANY	:	German Civil Code (Burgerlickes Gesetzbuch) Paragraph 979.
d. ITALY	:	Italy SMA-23/R—Manuale Dei Transporti Aerei.
e. NETHERLANDS	:	No legal provisions apply. Article not

claimed by rightful owner will be disposed of by public sale after one year; returns accrue to the state.

f. UNITED KINGDOM : AP 3150, RAF Manual of Movements.
g. UNITED STATES : MAC Manual 76-1 paragraph 46.12.9.

IMPLEMENTATION OF THE AGREEMENT

6. This Agreement will be considered to have been implemented when the procedures in the Details of Agreement (paragraphs 1 to 5 above) have been included in National Standing Orders, Manuals or Instructions.

ANNEX A TO DETAILS OF AGREEMENT
OF STANAG 3344 (EDITION NO. 3)

LOST AIR BAGGAGE MESSAGE (BAGLO)

1. FORMAT

ADDRESSOR
ADDRESSEE
(1) BAGLO
(2) Air Baggage Tag Number(s) and/or Owner Identification Marks.
(3) Colour, Number of pieces by type, any other brief descriptions that may facilitate identification.
(4) Flight Serial and Itinerary.
(5) Point of Origin, and Date of Departure and Destination Point of Air Baggage Shipment.
(6) Other instructions.

2. EXPLANATION

(1) The body of the message is to begin with 'BAGLO' which is short for 'Air Baggage Lost'.
(2) Owner identification marks may include: name, rank, serial number, parent unit or base, other markings.
(3) To include any name or serial number by which the flight is identified, departure and itinerant points served by the flight.
(4) Point and date on which the air baggage was emplaned and ultimate destination of the air baggage.
(5) Any other pertinent information or instruction.

3. EXAMPLE

FROM : COM 1010 ABW ANDREWS AFB MD
TO : 2 MOV U AIR TRENTON, ONTARIO
INFO : COM 1601 ATW MCGUIRE AFB NJ

(1) BAGLO
(2) Tag 46728 and 46729 EVANS SGT. USAF NO OTHER
(3) 2 BROWN SUITCASES WITH INITIALS HBE
(4) RACAF SPECIAL 1602 30 JULY MONTREAL, MCGUIRE, ANDREWS
(5) MONTREAL 30 JULY ANDREWS
(6) HOLD FOR DISPOSAL INSTRUCTIONS IF LOCATED

ANNEX B TO DETAILS OF AGREEMENT
OF STANAG 3344 (EDITION NO. 3)

FOUND AIR BAGGAGE MESSAGE (TROBAG)

1. FORMAT
   ADDRESSOR
   ADDRESSEE
   (1) TROBAG
   (2) Air Baggage Tag Number(s) and/or Owner Identification Marks.
   (3) Colour, Number of pieces by type, any other brief descriptions that may facilitate identification.
   (4) Locations of found air baggage.
   (5) Other information.

2. EXPLANATION
   (1) The body of the message is to begin with 'TROBAG' which is short for 'Found Air Baggage'.
   (2) Owner identification marks may include: name, rank, serial number, parent unit or base, other markings.
   (3) Point at which the air baggage is found and held.
   (4) Any other pertinent information.

3. EXAMPLE
   FROM : AIR TRANSPORT COMMAND HQ CFB TRENTON ONTARIO
   TO : 22 AIR FORCE FOUND BAGGAGE, TRAVIS AFB, CALIFORNIA.

   (1) TROBAG
   (2) TAG 67321 JONES SGT USAF NO OTHER
   (3) ONE BLUE SUITCASE WITH INITIALS CDJ
   (4) MONTREAL
   (5) NIL

ANNEX C TO DETAILS OF AGREEMENT
OF STANAG 3344 (EDITION NO. 3)

FOUND AIR BAGGAGE ADDRESSES

1. BELGIUM	:	Comdt. (BE) TAF–B Transport, Force Aerienne, Evere, Bruxelles 13, Belgium.
2. CANADA	:	Air Transport Command Headquarters, Canadian Forces Base, Trenton, Ontario, Canada
3. DENMARK	:	Headquarters Tactical Air Command, Royal Danish Air Force, Bedhus Pr. Koluraa, Denmark.
4. FRANCE	:	(a) Peacetime: Base de Transit Air No. 250, 5 Avenue de la Porte de Sevres, Paris 15e, France (b) Wartime: District de Transit de Paris, Paris, France.
5. Federal Republic of GERMANY	:	Lufttransportkommando der Bundeswehr, Köln, Wahn, Germany
6. ITALY	:	Commando Transportie Soccorso Aero, (Roma) Aeroporto Ciampino, Italia.
7. NETHERLANDS	:	De Inspecteur van Het Vervoerswezen, Violenweg 10–12, The Hague, Netherlands.
8. NORWAY	:	RNOAF Air Material Command, and Air Depot Forwarding Division, Fornebu, Oslo, Norway
9. PORTUGAL	:	The la Regiao Aerea, Portuguese Air Force, Lisbon, Portugal.
10. TURKEY	:	Turk Hava Kuvvetleri Komutanligi Lojistik Baskanligi, Ankara, Turkey.
11. UNITED KINGDOM	:	Headquarters Air Support Command, Royal Air Force, Upavon, Wiltshire, United Kingdom
12. UNITED STATES	:	(a) 21 Air Force Found Baggage, McGuire AFB, New Jersey, USA. (b) 22 Air Force Found Baggage, Travis AFB, California, USA.

APPENDIX W

STANAG 3543 (EDITION NO. 2)

AIR TRANSPORT CARGO/PASSENGER HANDLING SYSTEMS— REQUEST FOR INFORMATION

Agreed English/French texts

STANAG 3543
(Edition No. 2)
NAVY/ARMY/AIR

NATO STANDARDIZATION AGREEMENT
(STANAG)

AIR TRANSPORT CARGO/PASSENGER HANDLING SYSTEMS—
REQUEST FOR INFORMATION

Annex : A. List of National Offices.

OBJECT

1. The aim of this agreement is to standardize the means for obtaining information on the capabilities of the cargo and passenger handling systems at other nations' main and staging bases for long range airlift.

AGREEMENT

2. Participating nations agree that, on the request of another NATO nation, they will provide information on the capabilities of cargo and passenger handling systems available at their main and staging air transport bases.

REQUEST FOR INFORMATION

3. Requests for information should be directed to the subscribing NATO nations, addresses listed at Annex A, and should include following information:

a. Date of operation.
b. Base to be used.
c. Types of aircraft.
d. Number of aircraft by types.
e. Arrival intervals.
f. Turnaround time required.
g. Details of any cargo or passenger handling equipment that is special to aircraft type.
h. Any other miscellaneous information required.
j. Date by which information is required.

IMPLEMENTATION OF THE AGREEMENT

4. This STANAG is considered implemented by a nation when that nation has ratified the agreement and designated a national office through which this information may be obtained.

NATIONAL OFFICES

Requests for information should be directed to:

a. BELGIUM	:	EM Faé—VS 3/Tpt Ministry of Defence 1030—BRUXELLES
b. CANADA	:	Commander Air Transport Command Headquarters Astra, Ontario Attention: ATOC
c. DENMARK	:	Tactical Air Command Tactical Air Operations KOLVRAA DK 7470—KARUP J
d. FRANCE	:	Etat-Major de l'Armée de l'Air 4ème Bureau 24, boulevard Victor, 75—PARIS 15e.
e. FEDERAL REPUBLIC OF GERMANY	:	Air Transport Command 44—MUENSTER Manfred von Richthofen Strassee, 8
f. GREECE	:	
g. ITALY	:	Air Transport Command Ciampino Airport ROME
h. NETHERLANDS	:	
j. NORWAY	:	
k. PORTUGAL	:	
l. TURKEY	:	
m. UNITED KINGDOM	:	Movements 4 (RAF) Ministry of Defence Whitehall London SW 1A 2HB
n. UNITED STATES	:	Plans and Programs Division Directorate of Transportation HQ USAF WASHINGTON DC

GLOSSARY

Back haul—Shipment of material to or through an area from which the material had previously been shipped.

Backloading—The act of loading outbound cargo on a semitrailer that delivered inbound cargo.

Break bulk—To unload and distribute a portion or all of a shipment.

Break bulk point—An installation designated for the receipt and separation of shipments for a transshipping activity to which multiple shipment units may be consigned for further distribution within the transportation system.

Cargo booking—The designation/nomination of a vessel for shipment of offered cargo by a Military Sealift Command (MSC) cargo clearance order.

Cargo offering—A requirement placed on a movement control authority by a shipping activity to obtain instructions for shipment of cargo.

Cargo transporter—Reusable metal shipping container designated for worldwide surface and air movement of supplies and equipment.

Common service—That function performed by one military service in support of another military service for which reimbursement is not required from the service receiving support.

Common-user transportation—A point-to-point transportation service managed by a single service for common use by two or more services or other authorized agencies for which reimbursement is normally required from the service or agency receiving support.

Consignee—The receiving agency, unit, depot, or person to whom the shipment unit is addressed or consigned, as indicated by the appropriate shipping document.

Consignor—The activity from which a shipment unit is made.

Consolidation—A transportation unit consisting of multiple shipment units for one or more consignees.

Container—A reusable cargo container that is assigned a permanent control number; any container (e.g., crate) when packed with more than one shipment unit and assigned a one-time container control number in accordance with appendix B3, DOD Regulation 4500.32-R.

Container control activity—An activity exercising overall administrative control of container service and the movement of cargo transporters to, from, and within a theater. This activity is assigned to the freight movement division of the movement control agency.

Container control officer—A designated officer within an installation who receives and dispatches cargo transporters, and who is responsible for control, reporting, and efficient use of cargo transporters at the installation to which he is assigned. He has custodial property responsibility for cargo transporters from the time they are received until the time he reports their dispatch.

Containerization—One or more shipment units packed in a container, as defined in Container.

Control point—A position along a route of march at which men are stationed to give information and instructions for the regulation of supply or traffic.

Critical point—Any point along a route where interference with a movement may occur.

Cross haul—Concurrent shipment of material of the same kind in reverse direction.

Date received—The date a shipment is released by carrier to receiving activity, or the date offered and available for release, if earlier.

Date shipped–The date a shipment is released by consignor to carrier.

Density—Weight displacement of freight per cubic foot or other unit of volume.

Diversion—The rerouting of cargo or passengers to a new transshipment point or destination or on a different mode of transportation prior to arrival at ultimate destination.

Frustrated cargo—Any shipment of supplies and/or equipment which while en route to destination is stopped prior to receipt and for which further disposition instructions must be obtained.

Gross weight—The weight of an item together with the weight of the material used for packing and packaging.

Highway regulation—Planning, routing, and scheduling the actual use of highways by vehicles, personnel afoot (including troops, refugees, and civilians), and animals to utilize highway transportation facilities and equipment most effectively, in order to meet operational requirements. *This is a function of the highway traffic headquarters found in the movement control agency or center.*

Highway regulation point—Point on the highway at which the highway transport service records and reports the arrival and departure of, and regulates elements of highway movement by issuing instructions for continuance of the march, detours, diversions, schedules, etc.

Highway traffic control—The enforcement of the rules of the road, traffic regulations, and road discipline, including spot direction. *This is a function of the provost marshal and military police.*

Highway traffic headquarters—Headquarters exercising highway regulation which is the planning, routing, scheduling, and directing of the actual use of the highways by vehicles, personnel afoot (including troops, refugees, and other civilians), and animals, to utilize highway transportation facilities and equipment most effectively, in accordance with assigned tasks.

Inbound cargo—Cargo unloaded from ships or aircraft at a terminal for subsequent forwarding to consignee.

Infiltration (of vehicles)—The dispatch of individual vehicles over a specified route giving the appearance of casual traffic.

Installation transportation officer—A qualified individual appointed on competent orders to serve a military installation or activity that requires commercial transportation service. He is a member of the technical staff of the commander of the activity to which assigned and serves essentially as the point of contact between the installation or activity and the representative of the movement management system.

Intertheater shipments—Shipments that move into or out of the theater through water or aerial terminals.

Intratheater shipments—Movements originating and terminating within the theater.

Labeled cargo—Cargo of a dangerous nature, such as explosives, flammable or corrosive liquids, and the like, which is designated by different colored labels to indicate the requirement for special handling and stowage. Examples of such colored labels are—

Green—A label required on shipments of nonflammable gases.

Red—A label required on shipments of articles of flammable character (for example, alcohol, benzine, hydrogen gas).

White—A label required on shipments of acids or corrosive liquids (for example, sulphuric acid).

Yellow—A label required on shipments of flammable solids and oxidizing materials (for example, carbon dioxide).

Less than carload (LCL)—The quantity of freight less than that required for the application of a carload rate.

Line haul—In highway transportation, a type of haul involving long trips over the road wherein the portion of running time is high in relation to time consumed in loading and unloading. Line hauls usually are evaluated on the basis of ton miles forward per day. In rail transportation, this term applies to the movement or carriage of material over tracks of a carrier from one point to another, but excluding switching service.

Military Airlift Command (MAC)—The single manager operating agency for designated airlift service.

Military Road Network (STANAG 2151)—Includes all routes designated in peacetime by the host nations to meet anticipated military movements and transport movements, both allied and national.

Military Road Maneuver Network (STANAG 2151)—The road system required by a commander for conducting a specific operation and for the required logistical support of that operation. It is defined and controlled (allotment of maneuver credits) by the military authorities, national or allied, according to the breakdown of responsibilities in the theater of operations.

Military Sealift Command (MSC)—The single manager of ocean transportation to provide, under one authority, the control, operation, and administration of sea transportation for personnel, mail, and cargo of the Department of Defense (formerly designated Military Sea Transportation Service (MSTS)).

Military terminals—Any water or aerial port of embarkation operated by or for a military department as a terminal facility for receiving, loading, unloading, and forwarding military personnel or property. This term includes

commercial terminals where activities are conducted under the guidance of the military.

Movement control—The planning, routing, scheduling, and control of personnel and supply movements over lines of communication; also, an organization responsible for these functions.

Movement credit—The time allowed to one or more vehicles to move over a supervised, dispatch, or reserved route.

Movement number—A number allocated at the same time as the movement credit by the authority organizing the movement. This number will identify the column during the whole of the movement.

Movements (transportation movements)—The management of the movement capability to insure maximum accomplishment of movement requirements.

Outbound cargo—Cargo received in Army or aerial ports of embarkation for loading on ships or aircraft for oversea, coastwise, intertheater, intratheater, intercoastal, or retrograde movement.

Outsize and overweight movements—A vehicle, loaded or empty, exceeding the maximum measurements and/or weights established by the host nation.

Outsize item—An item measuring 6 feet or more in any dimension, excluding privately owned vehicles (POV), CONEX, and roll on/roll off RORO trailers.

Receiving transportation officer—The transportation officer serving the ultimate consignee.

Reconsignment—The act of reconsigning cargo which has been discharged at the initial destination but subsequently redirected to a new consignee prior to delivery to the original consignee.

Report of shipment (REPSHIP)—Notification by the shipper to the consignee that a specific shipment is en route.

Required delivery date (RDD)—The Julian date when material is required by the requisitioner.

Retrograde shipment—Cargo being returned from an oversea command to continental United States.

Roll on/roll off (RORO) service—A term used to describe the method whereby cargo-carrying semitrailers are towed directly into or out of RORO ships.

Route—The prescribed course to be traveled from a specific point of origin to a specific destination.

Controlled route—A route, the use of which is subject to traffic or movement restrictions.

Dispatch route—A roadway over which full control, both as to priorities of use and regulation of movement of traffic in time and space, is exercised. A movement credit is required for its use by an independent vehicle or group of vehicles, regardless of number or type.

Open route—A route, the use of which requires no movement credit.

Reserved route—A route, the use of which is (a) allocated exclusively to a particular authority or formation; or (b) intended to meet a particular requirement.

Supervised route—A roadway over which control is exercised by a traffic control authority by means of traffic control posts, traffic patrols, or both. A movement credit is required for its use by a column of 10 or more vehicles, or by any vehicle of exceptional size or weight.

Security cargo—Cargo having a ready sale in illicit markets and requiring exceptional measures for protection against theft.

Shipment unit—One or more items for movement from origin to a single consignee; assigned a single transportation control number; may be shipped in full or in partial increments, with splits at subsequent transship points; identity maintained from origin to consignee, from release of first increment to receipt of final, whether or not containerized.

Short ton—2,000 pounds. The standard unit of tons for land transportation.

Small lot shipment—A shipment of a weight or classification that makes it more economical to ship as less-than-carload or less-than-truckload units than as carload or truckload.

Special cargo—Cargo which requires special handling or protection, such as pyrotechnics and precision instruments.

Spotting—The placing of trailers, container transporters, or railcars where required to be loaded or unloaded.

Switching—The moving of cars from one place to another within the switching limits of a particular point.

Ton-miles—A unit of measurement expressed in terms of the movement of a specific number of short tons for a specific distance in miles.

Tracing—The act of requesting the location of a shipment for the purpose of expediting its movement or establishing the time of its delivery.

Traffic control point—A place at which traffic is controlled either by military police or by mechanical means.

Traffic control post—Point on the highway at which the military police enforce highway traffic control and furnish information and directions.

Transportation control and movement document—The basic document for all cargo movements and containing the basic information necessary to make movement management decisions through the worldwide DOD transportation system.

Transportation control number—The number assigned to control a shipment/consolidated shipment unit within the Defense Transportation System.

Transportation movement release (TMR)—Shipping instructions issued by a movement control authority in response to a cargo offering.

Transportation movement office—An office designed to coordinate all movements to be accomplished and to insure that maximum effective and economic use is made of available resources. These movement offices are assigned to the communications zone, the field army, and the corps support brigade.

Transportation officer—The person appointed or designated by the commander of a military activity to perform transportation services and movement management at a district, base, installation, or activity. The term "transportation officer" also applies to movement management officers.

Transportation unit—A transportation unit consists of one or more shipment units for shipment under one transportation control number moving on a single conveyance.

Transshipment—The transfer of a load from one transport facility or vehicle to another, using the same or different means of transport.

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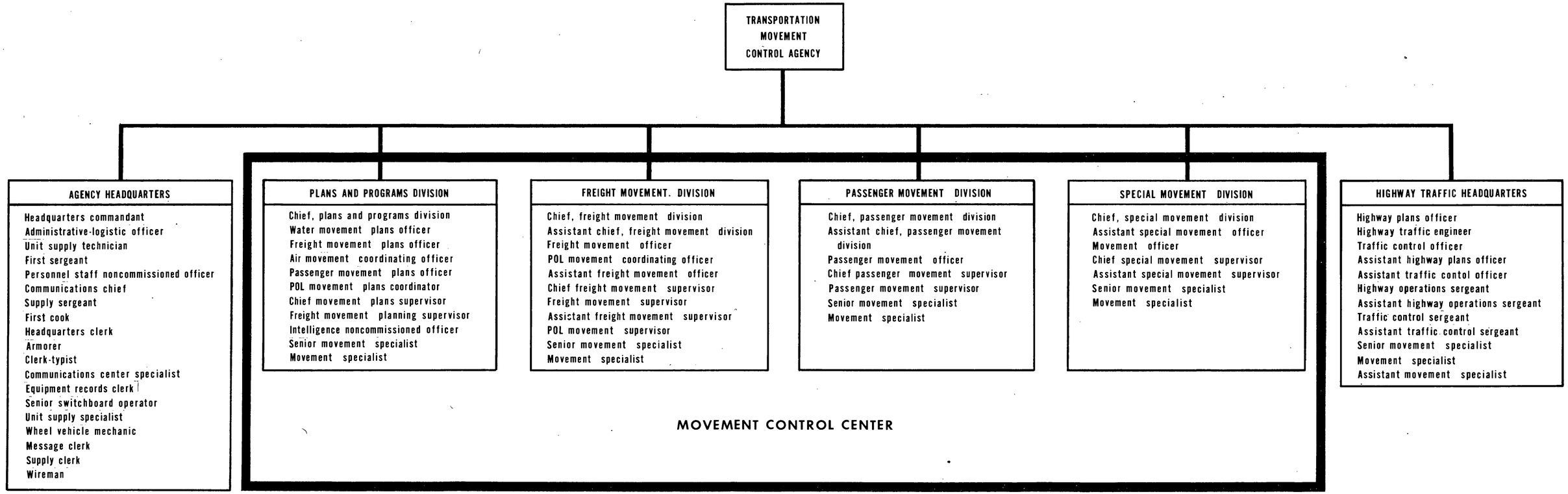


Figure 2-1. Organization of the transportation movement control agency (theater army support command).

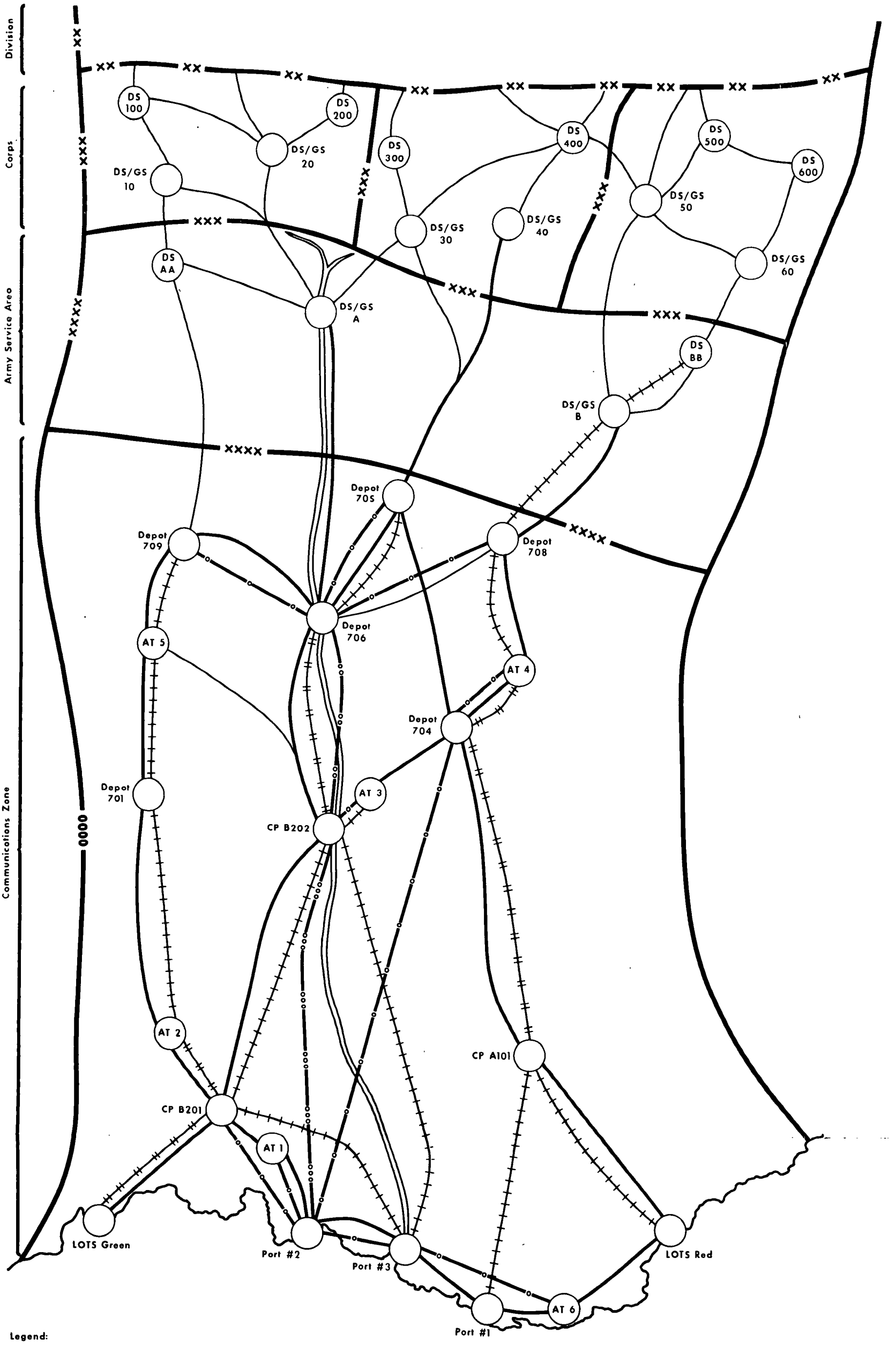
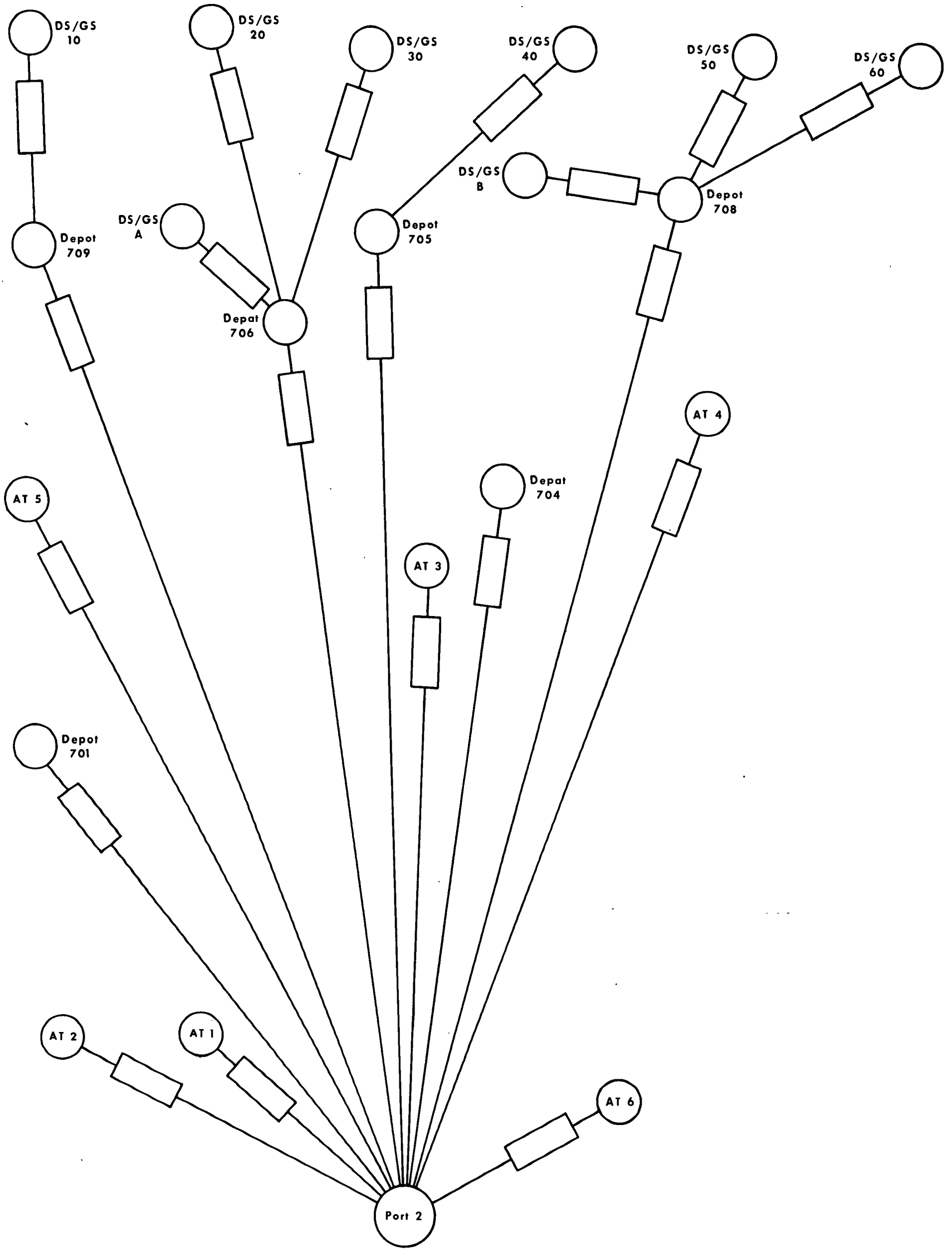
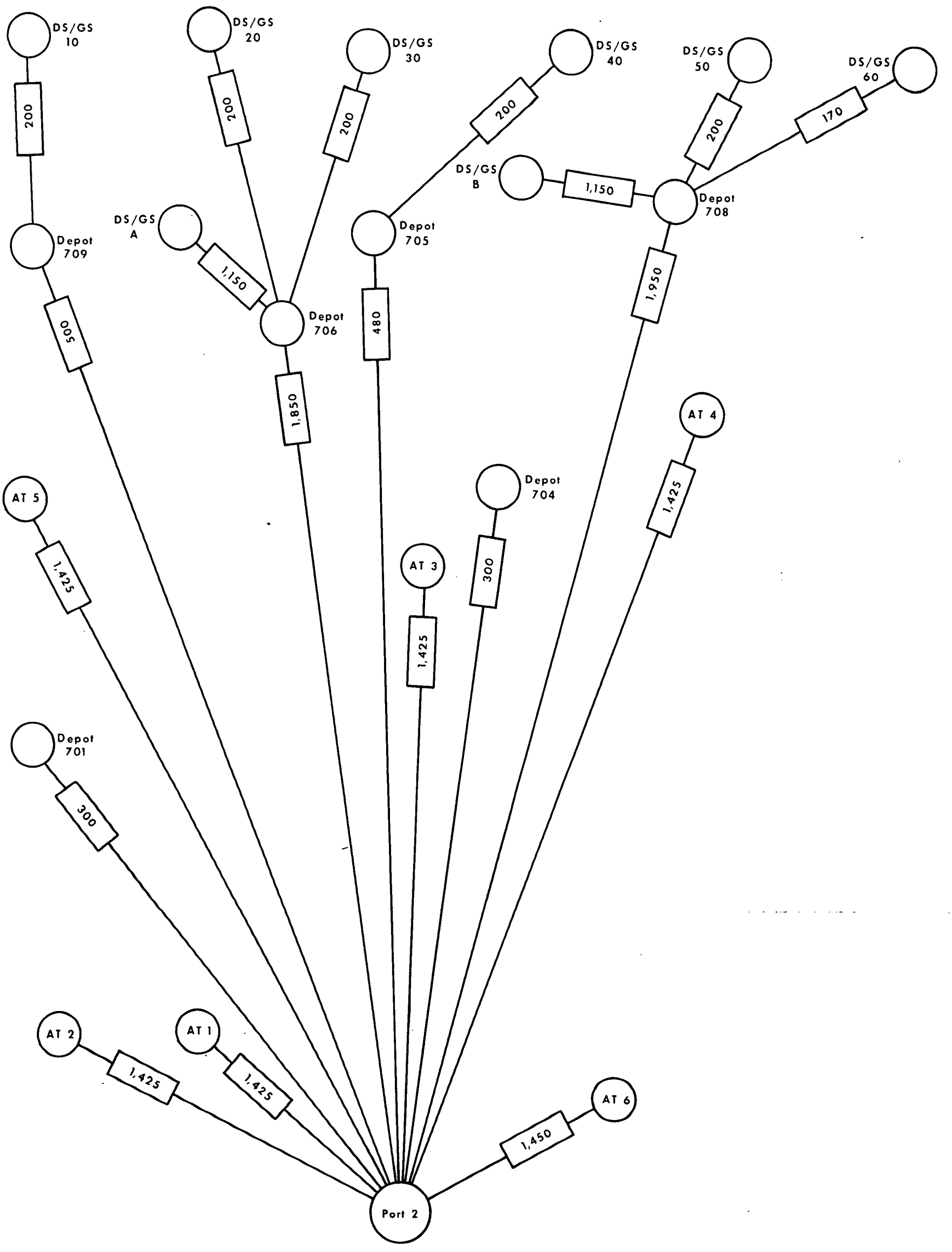


Figure F–1. Map showing theater of operations for practical exercise.



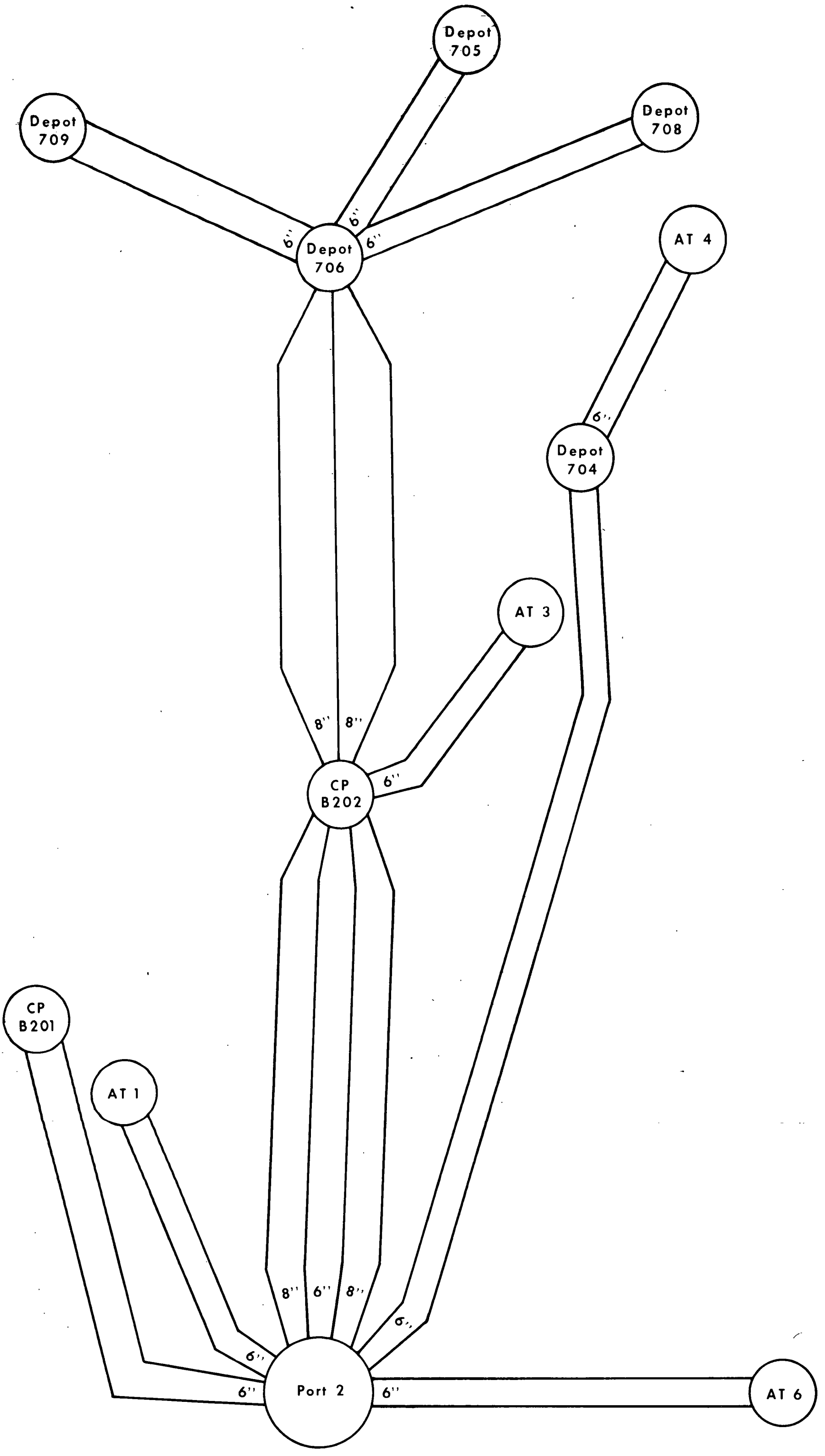
Note: Insert the closs III requirements in the oppropriate boxes, using doto contained in the origin, destinotion, and tonnage list shown in toble F-1.

Figure F–2. Daily bulk petroleum requirements blank schematic for the period D+29 through D+35.



Note: Requirements to be moved total 17,425 short tons.(As a cross—check refer to tonnage shown in table F-1.)

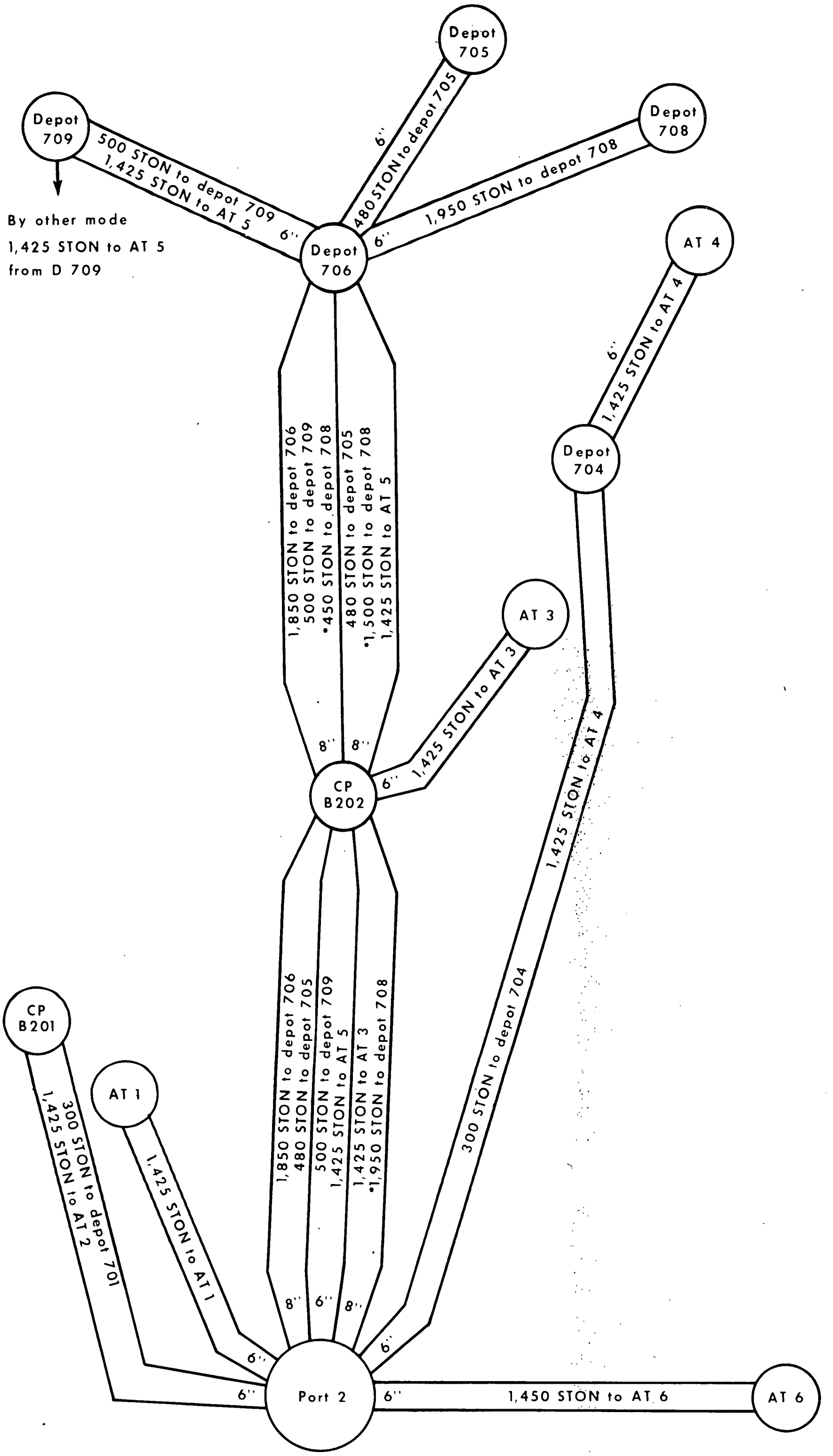
Figure F–3. Daily bulk petroleum requirements completed schematic for the period D+29 through D+35.



Note:

1. This schematic represents the pipeline system as shown on the map in figure F-1.
2. Pipeline capacities are as follows:
   6-inch pipe: 3,000 short tons daily
   8-inch pipe: 3,480 short tons daily

Figure F–4. Petroleum pipeline blank schematic for the period D+29 through D+35.



A total of 13,955 short tons can be moved by pipeline.

*Note that 1,950 short tons moving from port 2 to depot 708 was split at CP B202, with 450 short tons proceeding from there by one line and 1,500 by the other. This is representative of actions that must be taken to fit the capabilities to the requirements.

Figure F–5. Petroleum pipeline completed schematic for the period D+29 through D+35.

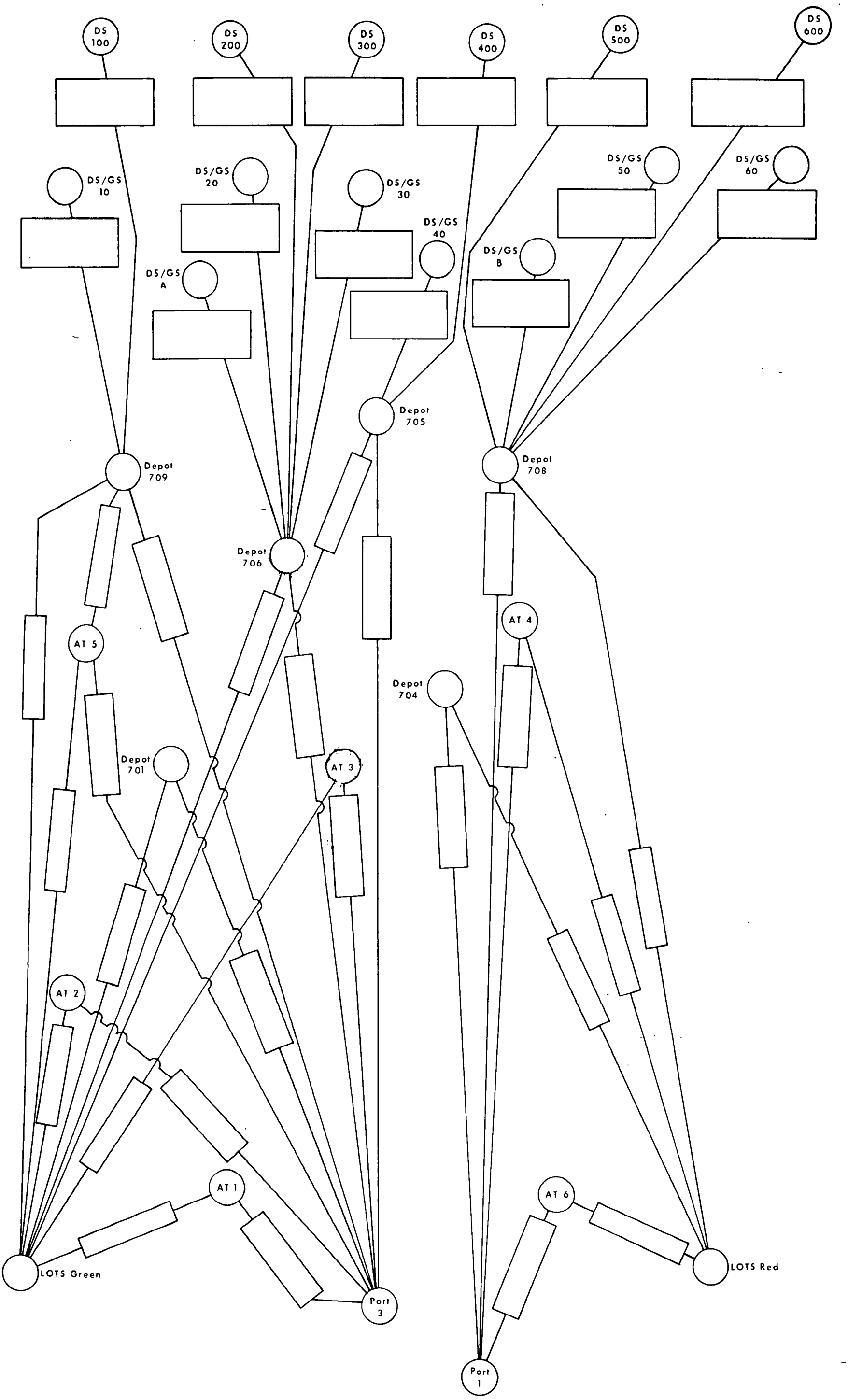


Figure F–6. Daily supply requirements blank schematic for the period D+29 through D+35.

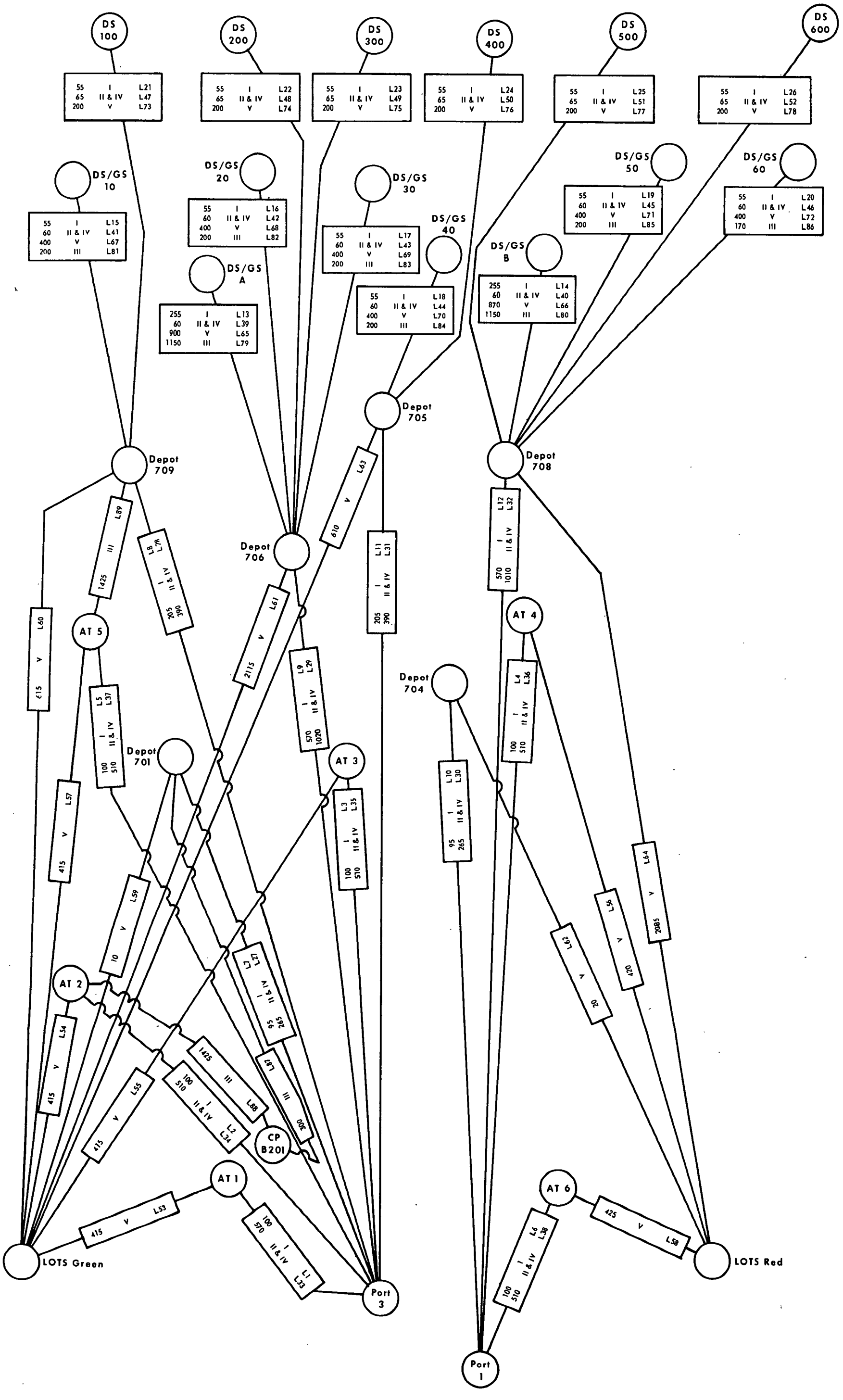


Figure F–7. Completed daily supply requirements schematic for the period D+29 through D+35.

	LOTS GREEN	LOTS RED	PORT #2	PORT #3	PORT #1	DEPOT 701	DEPOT 709	DEPOT 706	DEPOT 704	DEPOT 705	DEPOT 708	AT-1	AT-2	AT-3	AT-4	AT-5	AT-6	DS/GS A	DS/GS B	DS/GS 10	DS/GS 20	DS/GS 30	DS/GS 40	DS/GS-50	DS/GS 60	DS 100	DS 200	DS 300	DS 400	DS 500	DS 600	CP B201	CP B202	CP A101
LOTS GREEN																																	
LOTS RED	90																																
PORT #2	50	69																															
PORT #3	55	42	25																														
PORT #1	70	30	16	15																													
DEPOT 701	66	114	67	75	90																												
DEPOT 709	102	150	103	111	126	35																											
DEPOT 706	96	144	97	104	119	55	20																										
DEPOT 704	85	80	90	78	93	-	-	-																									
DEPOT 705	114	110	115	108	123	74	38	18	30																								
DEPOT 708	126	110	120	108	123	81	-	25	30	-																							
AT-1	33	64	18	24	39	52	86	81	74	99	-																						
AT-2	36	84	39	45	60	30	65	84	77	102	107	21																					
AT-3	74	120	75	82	97	-	-	38	15	56	53	59	62																				
AT-4	102	92	102	90	105	-	-	-	12	-	18	86	89	27																			
AT-5	87	130	87	97	112	20	15	35	-	53	60	71	50	-	-																		
AT-6	78	18	50	25	10	100	135	-	103	133	133	49	70	108	110	120																	
DS/GS A	138	186	139	146	161	-	-	42	-	-	-	123	126	80	-	-	-																
DS/GS B	144	134	144	132	147	-	-	49	54	-	24	-	-	69	42	-	152	-															
DS/GS 10	150	216	151	159	174	86	50	72	-	-	-	136	115	110	-	65	-	30	-														
DS/GS 20	162	210	163	170	185	-	-	66	-	-	-	-	-	104	-	-	-	24	-	-													
DS/GS 30	156	152	154	161	163	-	-	57	70	40	-	-	-	85	-	-	-	15	-	-	-												
DS/GS 40	156	152	156	149	164	-	-	59	71	41	-	-	-	97	-	-	-	27	-	-	-	12											
DS/GS 50	168	164	172	160	175	-	-	77	82	-	52	-	-	97	70	-	-	-	28	-	-	-	-										
DS/GS 60	174	164	172	160	175	-	-	77	82	-	52	-	-	97	70	-	-	-	28	-	-	-	-	17									
DS 100	162	228	181	171	186	98	62	84	-	-	-	148	127	-	-	77	-	42	-	12	18	-	-	-	-								
DS 200	172	222	181	180	195	-	-	84	-	-	-	-	-	-	-	-	-	42	-	-	10	-	-	-	-	28							
DS 300	168	164	164	171	173	-	-	65	80	50	-	-	-	95	-	-	-	23	-	-	-	10	22	-	-	-	-						
DS 400	171	167	172	155	180	-	-	75	87	57	-	-	-	113	-	-	-	-	43	-	-	25	16	15	32	-	-	-					
DS 500	183	176	185	173	188	-	-	90	95	-	65	-	-	110	83	-	-	-	41	-	-	-	-	13	30	-	-	-	-				
DS 600	192	182	185	173	188	-	-	90	95	-	65	-	-	110	83	-	-	-	41	-	-	-	-	30	13	-	-	-	-	15			
CP B201	24	72	25	32	48	42	77	72	65	90	95	9	12	50	77	62	58	114	119	127	138	129	131	-	-	139	148	139	147	-	-		
CP B202	66	114	67	74	89	-	50	30	23	48	53	51	54	8	35	36	100	72	77	102	96	87	89	105	105	114	106	97	102	118	118	42	
CP A101	96	35	58	33	48	-	-	-	45	75	75	57	78	60	57	-	58	-	99	-	-	115	116	127	127	-	-	125	132	140	140	60	-	

Figure F–8. Highway distances for points shown in figure F–1.

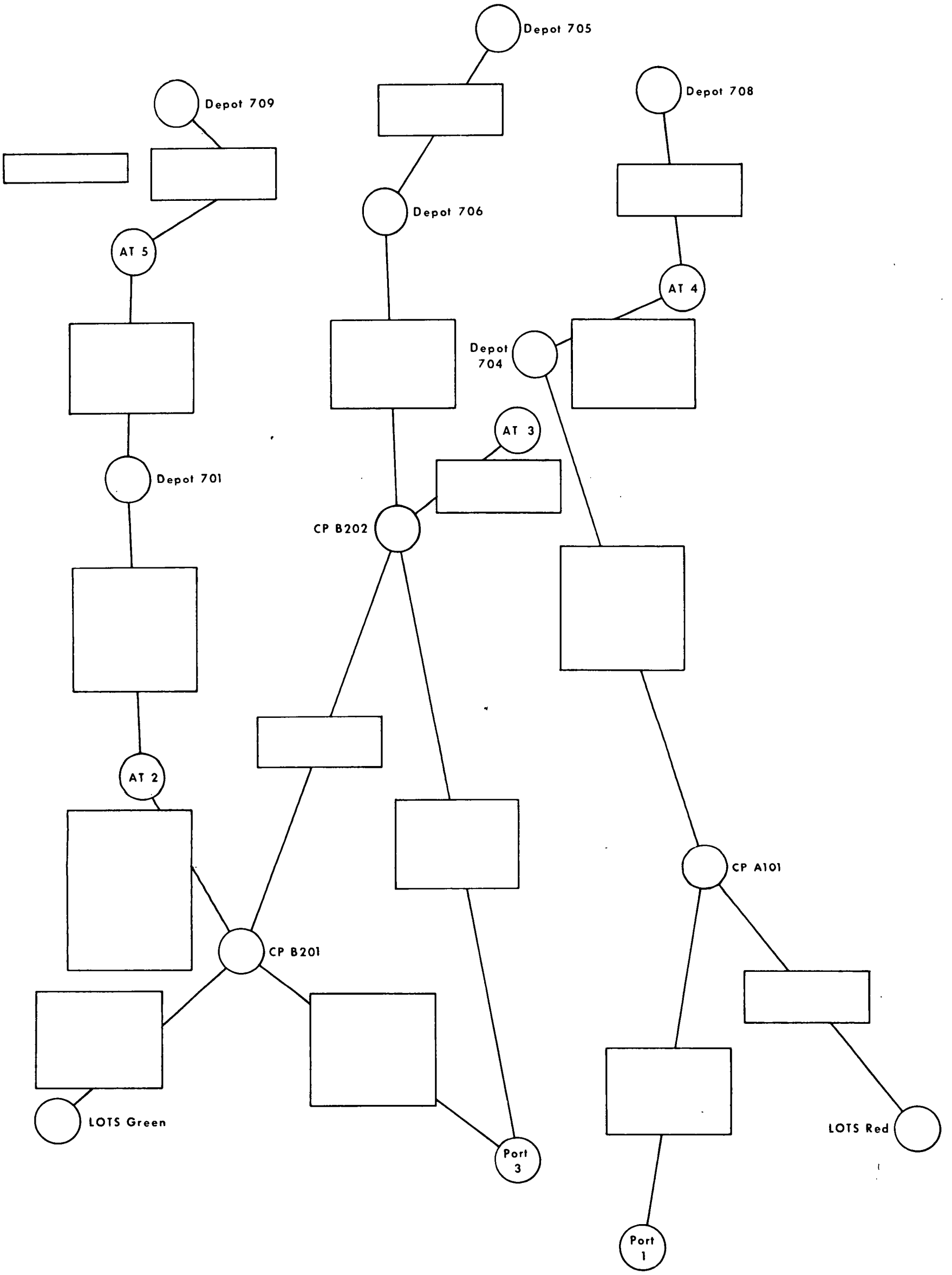
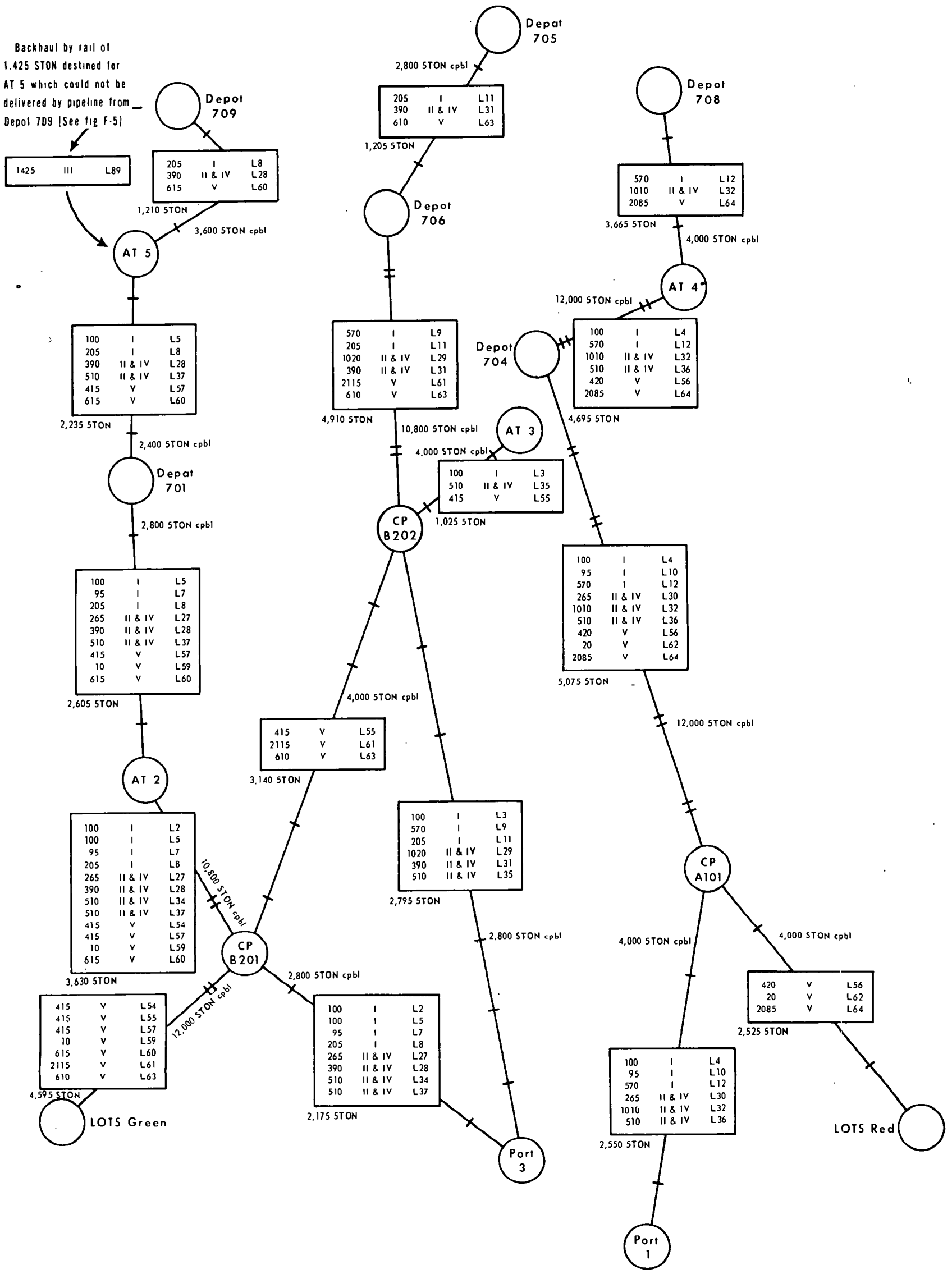


Figure F–9. Daily rail movement blank schematic for the period D+29 through D+35.



Legend:

Single track — 10 trains per day, 400 short tons per train, 4,000-short-ton capability.

Double track — 30 trains per day, 400 short tons per train, 12,000-short-ton capability.

Notes:

1. A total of 31 original shipments have been made by rail.
2. The following daily train operations reduce capabilities as shown:
   Between depot 701 and depot 709, one combination hospital and passenger train — reducing this capability by 400 short tons.
   Between port 3 and AT 5, three hospital trains per day — reducing this capability by 1,200 short tons.
   Between port 3 and depot 705, three hospital trains per day — reducing this capability by 1,200 short tons.

Figure F–10. Daily rail movement completed schematic for the period D+29 through D+35.

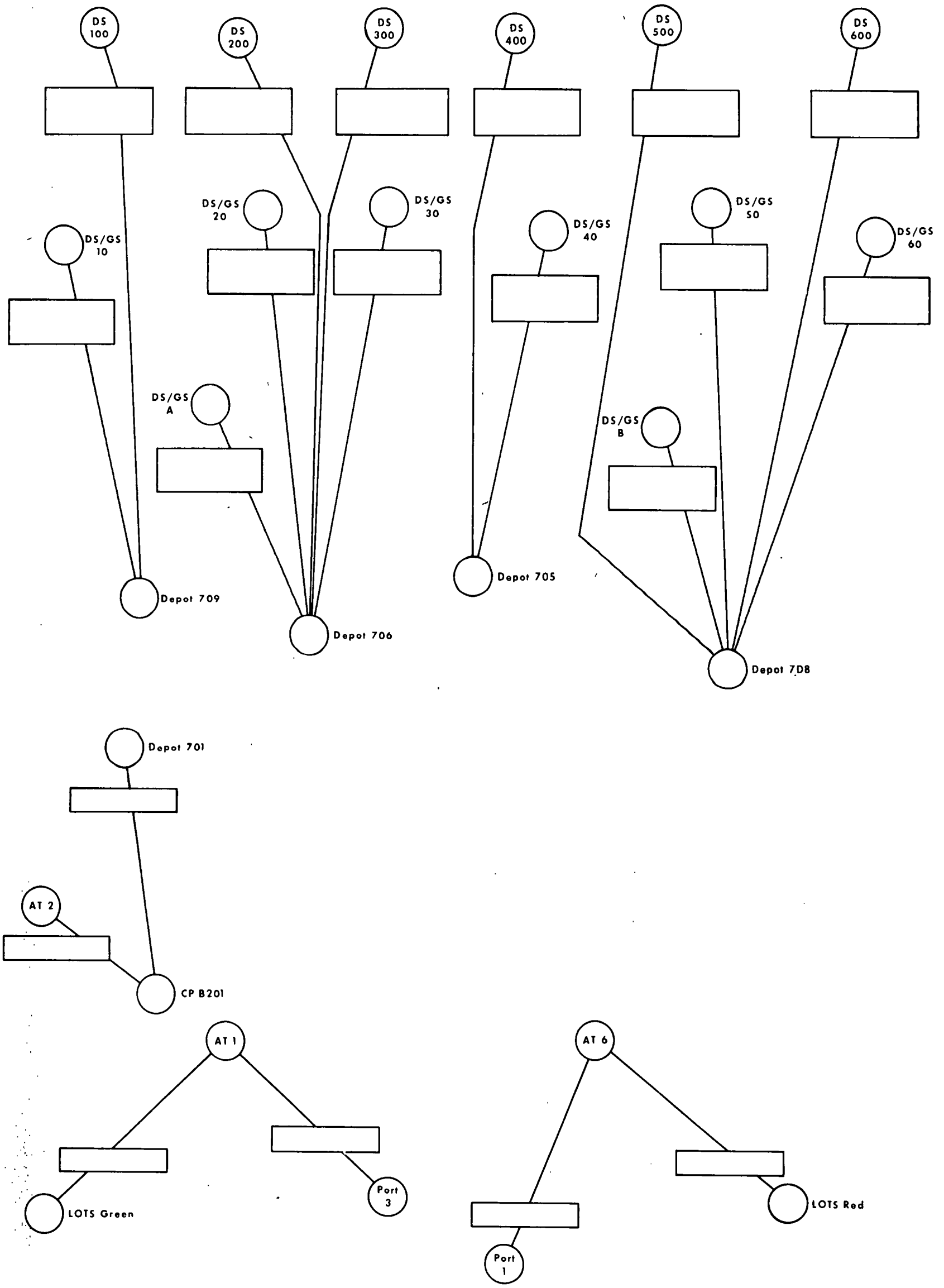
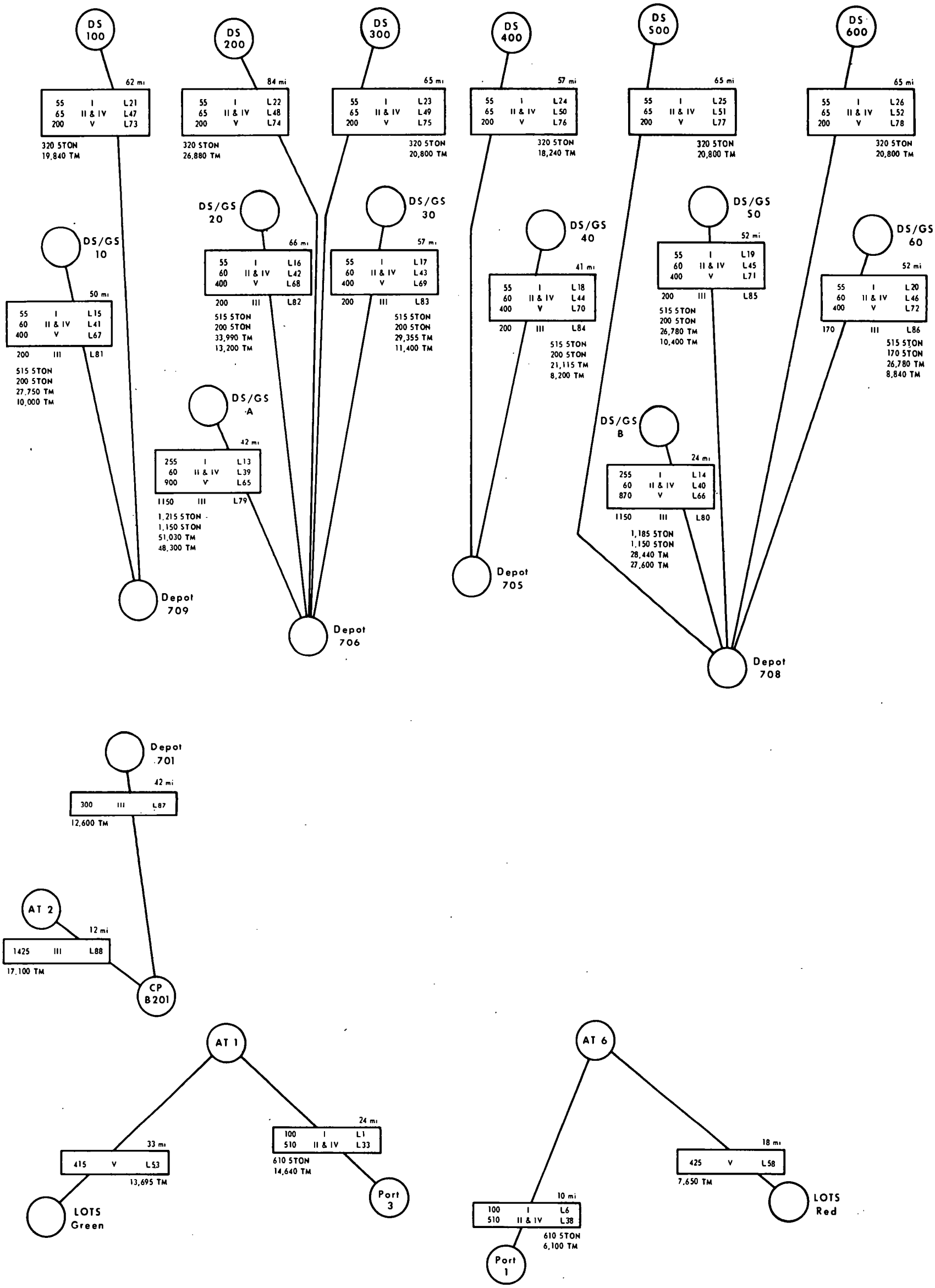


Figure F–11. Daily highway movement blank schematic for the period D+29 through D+35.



Notes:

1. A total of 58 original shipments have been made by highway.

2. Class III is figured separately because the type of vehicles needed to transport POL differs from that required for general cargo; hence separate totals must be shown for short tons (STON) and ton-miles (TM).

Figure F–12. Daily highway movement completed schematic for the period D+29 through D+35.

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